# WRR-27

*E Model*

SONY
UHF TUNER
WRR-27
POWER
ON
OFF
MONITOR
LEVEL
BAT
ANT
23

# UHF PORTABLE TUNER

## SPECIFICATIONS

**Tuner section**

| | |
|---|---|
| Circuit system | Dual-conversion superheterodyne |
| Receiving frequency | 470.40 – 488.00 MHz<br>(Refer to page 8 for channel number and receiving frequency.) |
| Modulation | $F_3$ (frequency modulation) |
| Antenna terminal | BNC-R type connector (UG-625/U) |
| Monitor terminal | 3.5 mm dia. jack (for miniplug) |
| Intermediate frequency | 1st : 49.47 MHz, 2nd : 10.7 MHz |
| Effective selectivity | More than 70 dB (±300 kHz) |
| Spurious response ratio | More than 80 dB |
| Image response ratio | More than 110 dB |
| Signal-to-noise ratio | More than 25 dB at 20 dB input (0 dB = 1 $\mu$V)<br>More than 53 dB at 60 dB input (0 dB = 1 $\mu$V)<br>More than 57 dB (weighted) at 60 dB input (0 dB = 1 $\mu$V) |
| Muting level | 10 dB (0 dB = 1 $\mu$V) |
| Frequency response | 400 - 15,000 Hz ±0.5 dB (50 $\mu$sec.)<br>100 Hz at −3 dB |
| Harmonic distortion | Less than 0.5 % (modulation frequency 100 - 10,000 Hz, frequency deviation ±22.5 kHz, 60 dB input) |
| Rated output level | Within −64 dBm ±2 dB (modulation frequency 1 kHz, frequency deviation ±3 kHz, 60 dB input) |
| Output impedance | 600 ohms, balanced |
| Monitor output | 5 mW (8 ohm load, modulation frequency 1 kHz, frequency deviation ±3 kHz, 60 dB input) |
| Operating temperature | −20°C to + 60°C (−4°F to + 140°F) |

**General**

| | |
|---|---|
| Semiconductors | 3 ICs, 12 FETs, 23 transistors, 22 diodes, 1 LED |
| Power requirement | 9 V dc, six batteries, size AA (IEC designation R6) |
| Current consumption | 80 mA or less |
| Battery life | Approx. 5 hours of continuous use with Sony New Super Batteries SUM-3NS |
| Dimensions | Approx. 148 × 35 × 116 mm (w/h/d)<br>($5\,^7/_8 \times 1\,^1/_8 \times 4\,^9/_{16}$ inches)<br>incl. projecting parts and controls |
| Weight | 800 g (1 lb 12 oz) with batteries |
| Finish | Satin-nickel |

Design and specifications subject to change without notice.

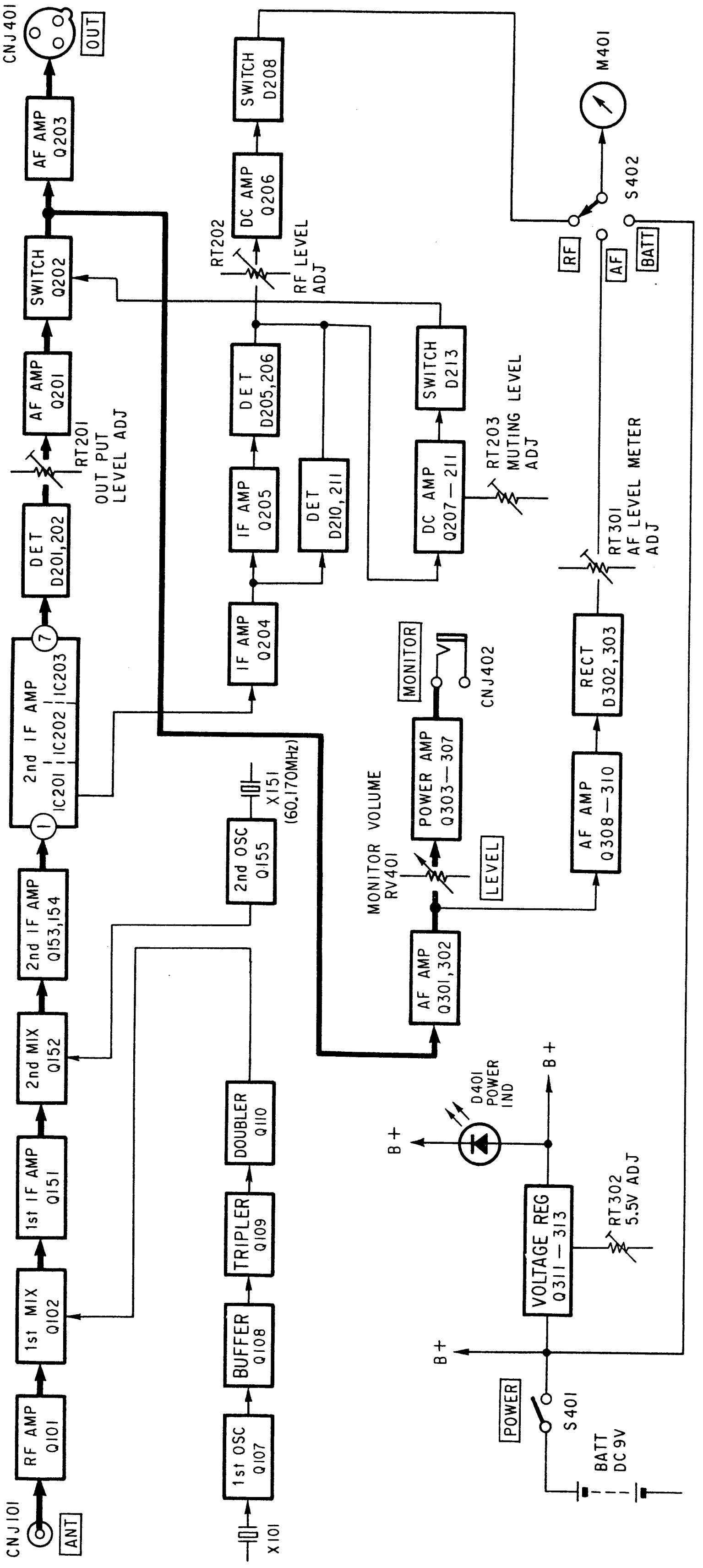
MICROFILM

SONY®

SERVICE MANUAL

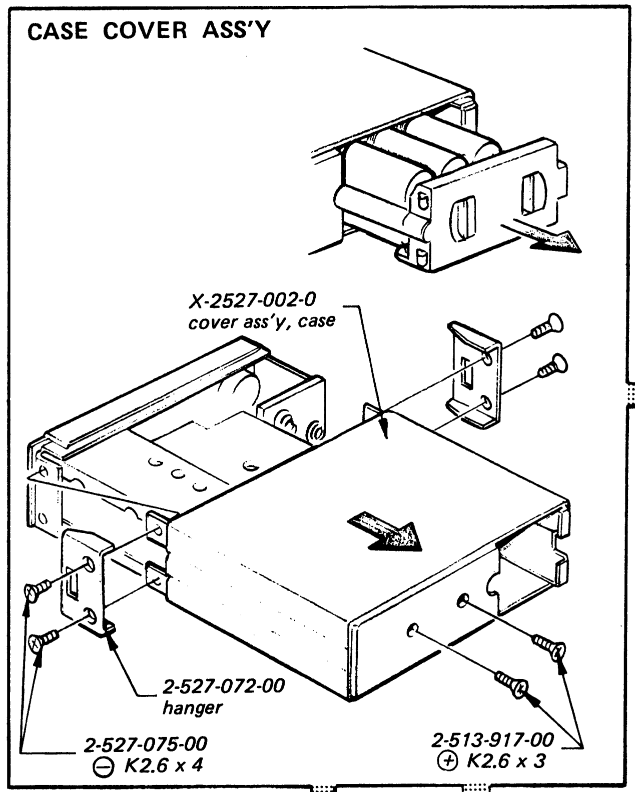
# SECTION 1
# OUTLINE

## 1-1. BLOCK DIAGRAM – Serial No.45038 and later

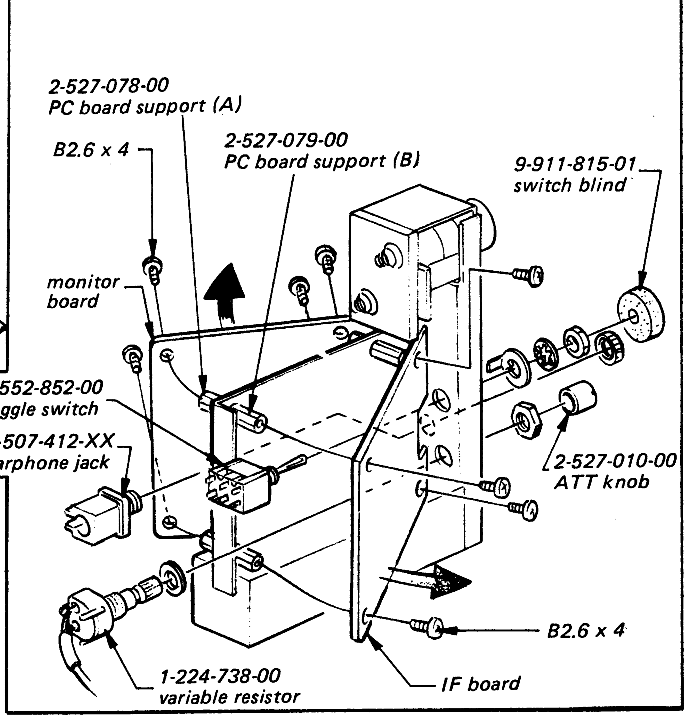

CNJ401
OUT
AF AMP Q203
SWITCH Q202
AF AMP Q201
RT201 OUT PUT LEVEL ADJ
DET D201,202
2nd IF AMP IC201 IC202 IC203
7
1
2nd IF AMP Q153,154
2nd MIX Q152
1st IF AMP Q151
1st MIX Q102
RF AMP Q101
CNJ101
ANT
1st OSC Q107
X101
BUFFER Q108
TRIPLER Q109
DOUBLER Q110
2nd OSC Q155
X151 (60.170MHz)
IF AMP Q204
IF AMP Q205
DET D205,206
DET D210,211
RT202
RF LEVEL ADJ
DC AMP Q206
SWITCH D208
SWITCH D213
DC AMP Q207 — 211
RT203 MUTING LEVEL ADJ
M401
S402
RF
AF
BATT
RT301 AF LEVEL METER ADJ
RECT D302,303
AF AMP Q308 — 310
MONITOR
CNJ402
POWER AMP Q303 — 307
MONITOR VOLUME RV401
LEVEL
AF AMP Q301,302
D401 POWER IND
B+
B+
B+
VOLTAGE REG Q311 — 313
RT302 5.5V ADJ
POWER
S401
BATT DC 9V

## SECTION 2
## DISASSEMBLY

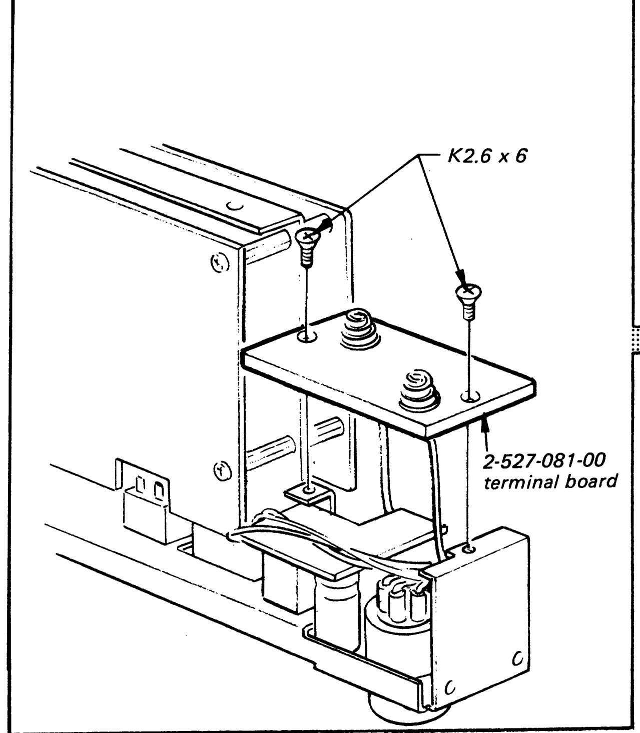
**CASE COVER ASS'Y**


X-2527-002-0
cover ass'y, case
2-527-072-00
hanger
2-527-075-00
⊖ K2.6 x 4
2-513-917-00
⊕ K2.6 x 3

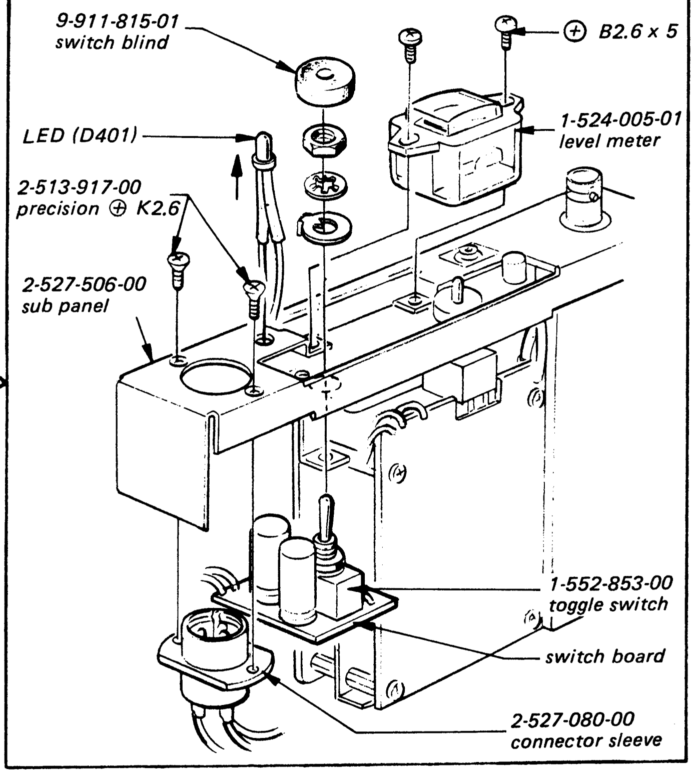
**EARPHONE JACK, TOGGLE SWITCH, VARIABLE RESISTOR**


2-527-078-00
PC board support (A)
B2.6 x 4
2-527-079-00
PC board support (B)
9-911-815-01
switch blind
monitor board
1-552-852-00
toggle switch
1-507-412-XX
earphone jack
2-527-010-00
ATT knob
B2.6 x 4
1-224-738-00
variable resistor
IF board

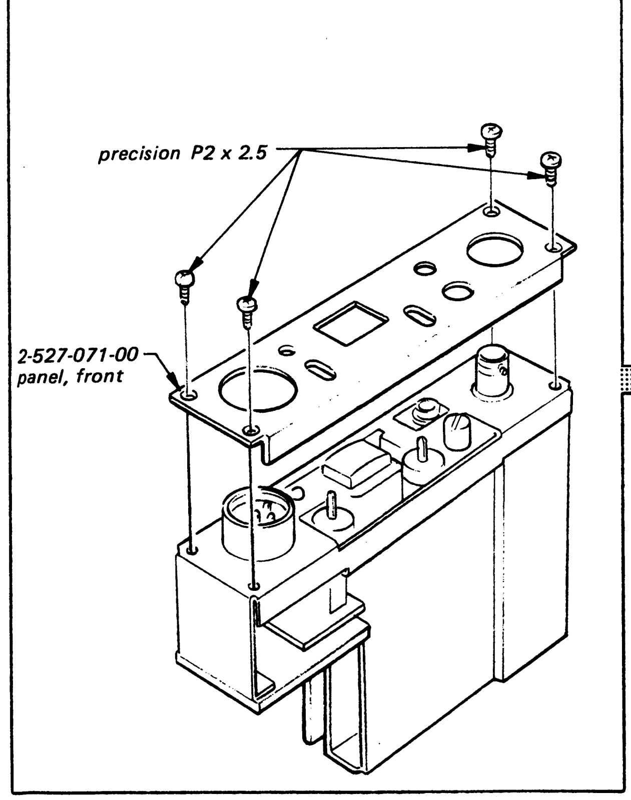
**TERMINAL BOARD**


K2.6 x 6
2-527-081-00
terminal board

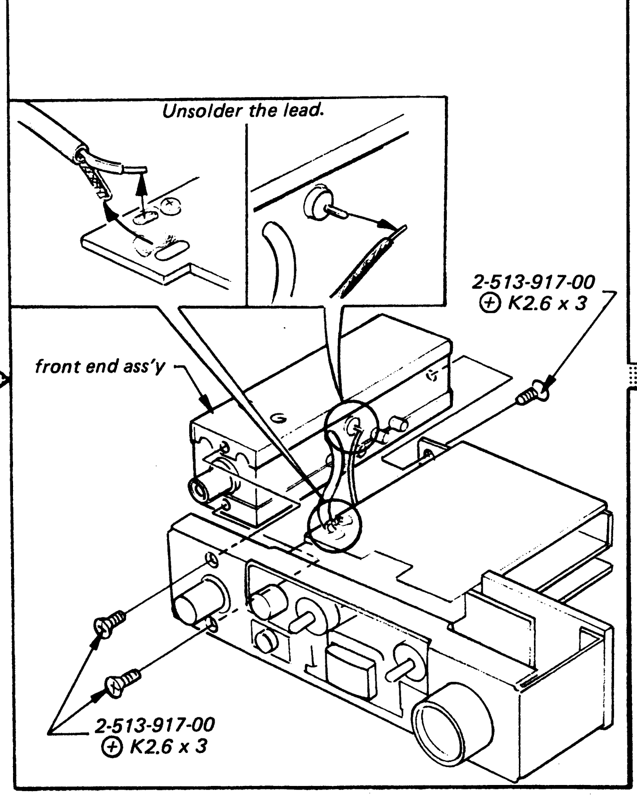
**LEVEL METER, SWITCH BOARD, CONNECTOR SLEEVE**


9-911-815-01
switch blind
⊕ B2.6 x 5
LED (D401)
1-524-005-01
level meter
2-513-917-00
precision ⊕ K2.6
2-527-506-00
sub panel
1-552-853-00
toggle switch
switch board
2-527-080-00
connector sleeve

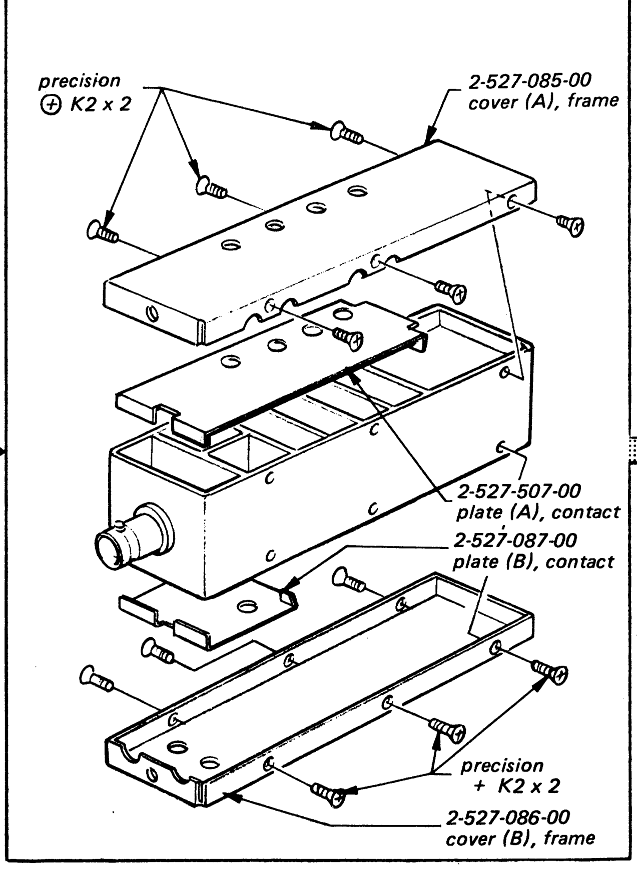
**FRONT PANEL**


precision P2 x 2.5
2-527-071-00
panel, front

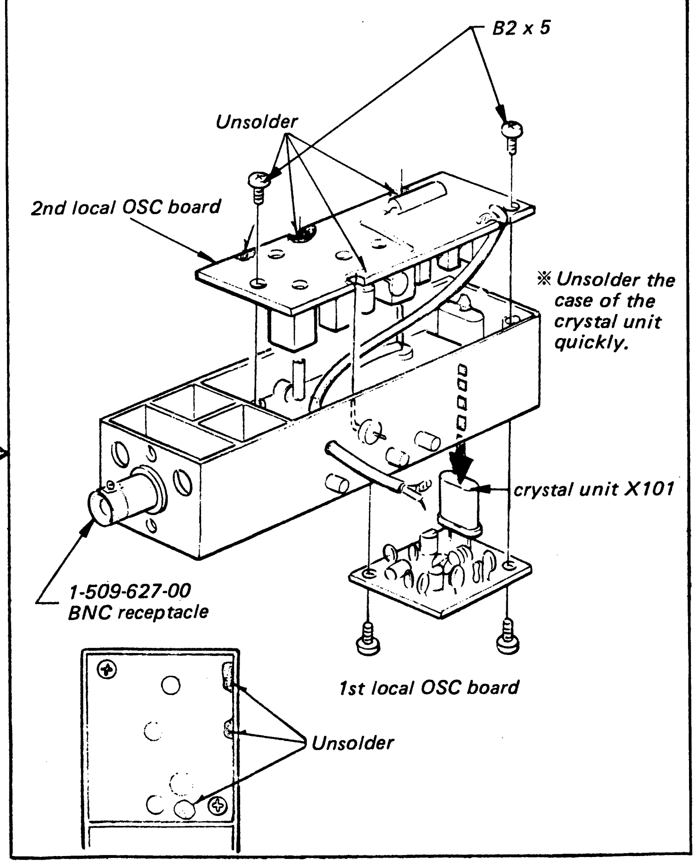
**FRONT END**


Unsolder the lead.
2-513-917-00
⊕ K2.6 x 3
front end ass'y
2-513-917-00
⊕ K2.6 x 3

**FRONT END, FRAME COVER**


precision
⊕ K2 x 2
2-527-085-00
cover (A), frame
2-527-507-00
plate (A), contact
2-527-087-00
plate (B), contact
precision
+ K2 x 2
2-527-086-00
cover (B), frame

**LOCAL OSC BOARD**


B2 x 5
Unsolder
2nd local OSC board
※ Unsolder the case of the crystal unit quickly.
crystal unit X101
1-509-627-00
BNC receptacle
1st local OSC board
Unsolder

# SECTION 3
# ADJUSTMENTS

## 3-1. FRONT END ADJUSTMENT

[CONNECTION DIAGRAM]

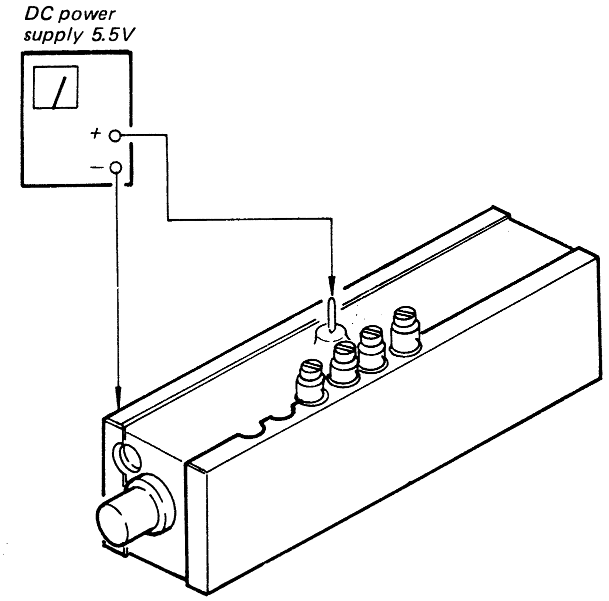
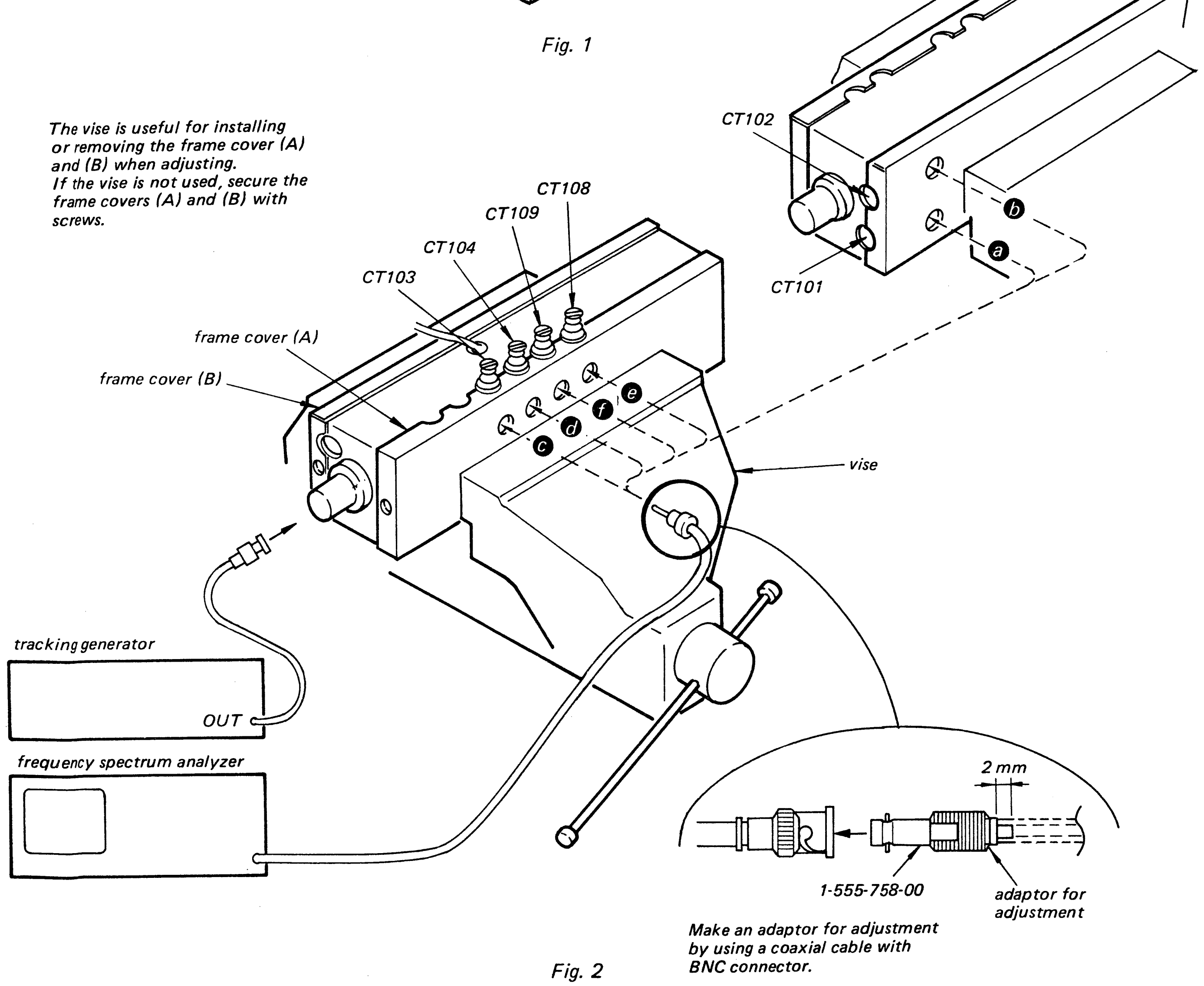

DC power supply 5.5V
+
−

Fig. 1


CT102
CT101
CT108
CT109
CT104
CT103
frame cover (A)
frame cover (B)
a
b
c
d
e
f
vise
tracking generator
OUT
frequency spectrum analyzer
2 mm
1-555-758-00
adaptor for adjustment

*The vise is useful for installing or removing the frame cover (A) and (B) when adjusting. If the vise is not used, secure the frame covers (A) and (B) with screws.*

*Make an adaptor for adjustment by using a coaxial cable with BNC connector.*

Fig. 2

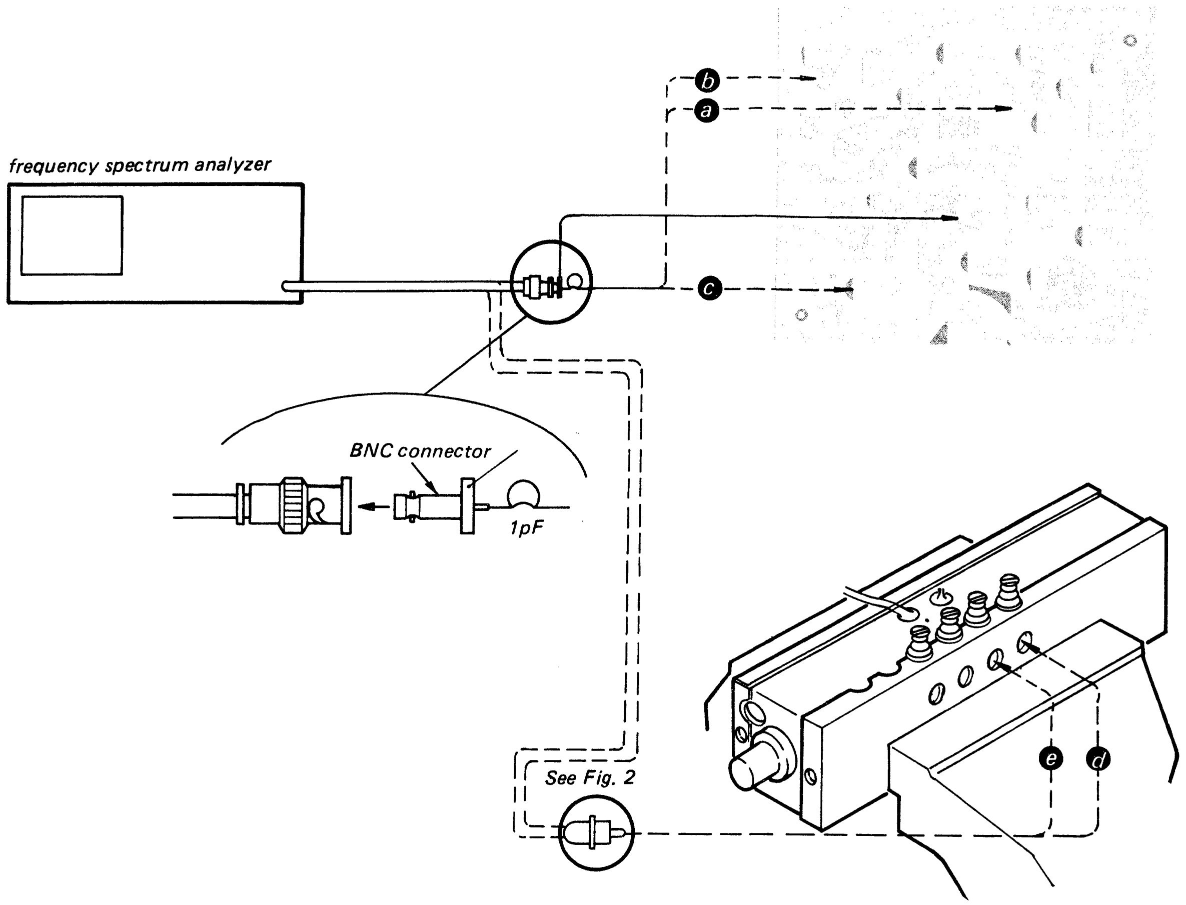

frequency spectrum analyzer
a
b
c
d
e
BNC connector
1pF
See Fig. 2

Fig. 3

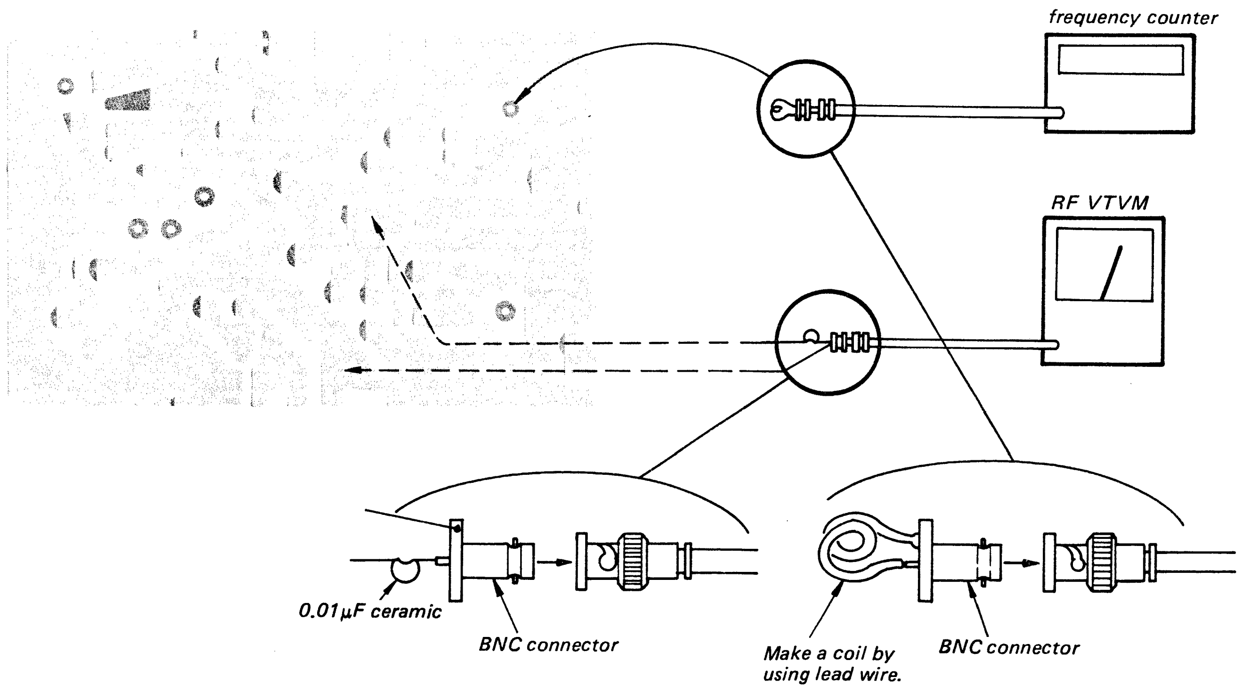

frequency counter
RF VTVM
0.01μF ceramic
BNC connector
Make a coil by using lead wire.
BNC connector

Fig. 4

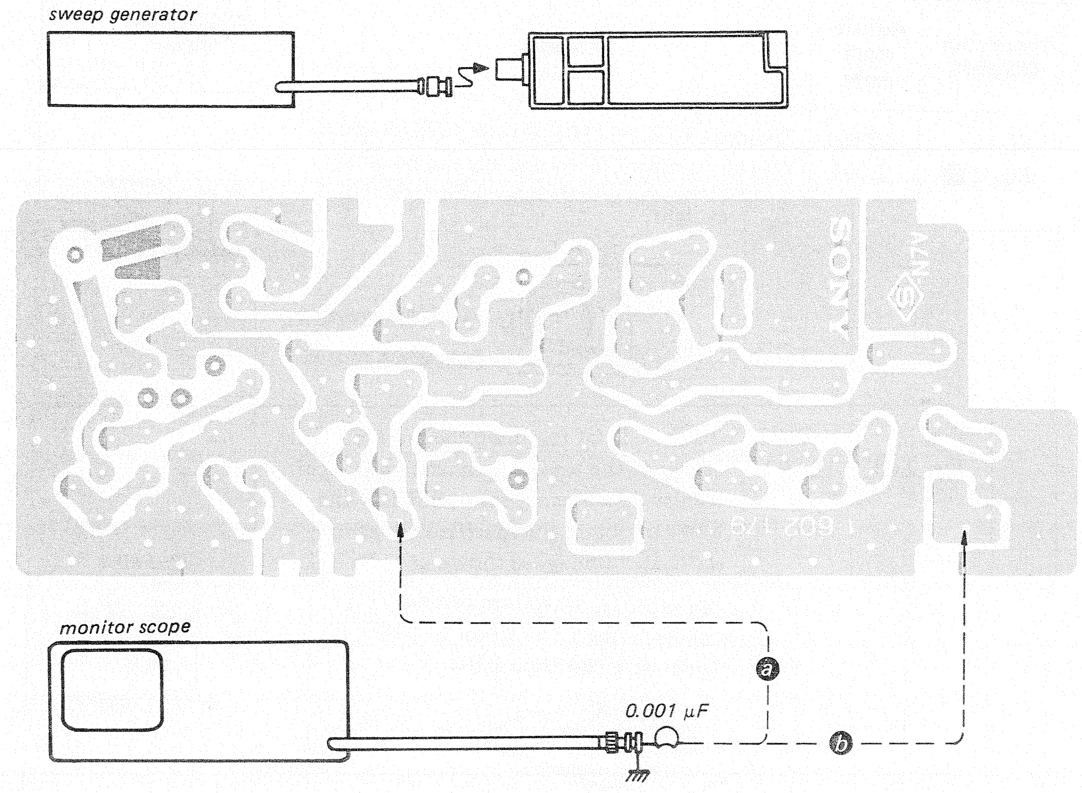

sweep generator
SONY
monitor scope
ⓐ
0.001 µF
ⓑ

Fig. 5

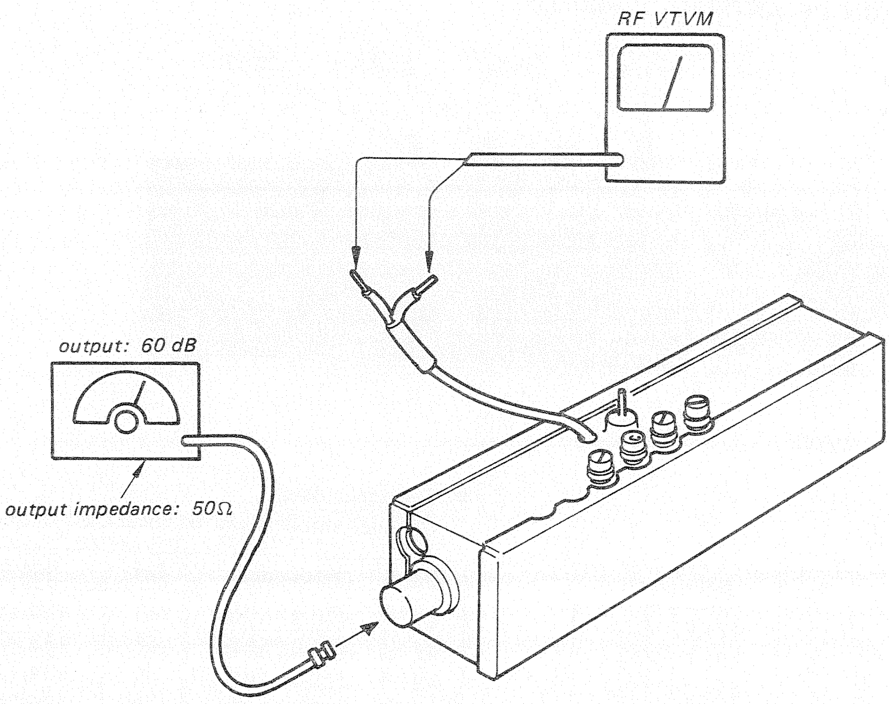
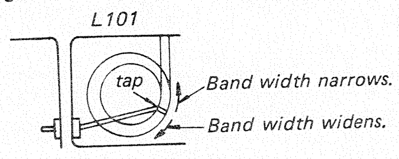
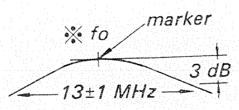

RF VTVM
output: 60 dB
output impedance: 50Ω

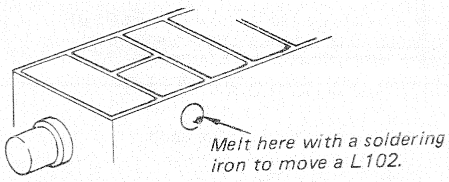
Fig. 6

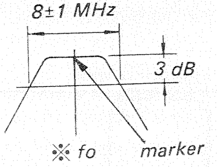
## [ADJUSTMENT PROCEDURE]

See pages 5 to 7 for connection diagrams.

<table>
<tr><th></th><th>Step</th><th>Connection Diagram</th><th>Adjustment Parts</th><th>Remarks</th><th>Adjustment Value</th></tr>
<tr><td rowspan="2">Antenna stage Adjustment</td><td>1</td><td>Fig. 1<br>Fig. 2 ⓐ</td><td>CT101<br>L101</td><td>Detune CT102, CT103, CT104, CT108 and CT109. Adjust CT101 and the tap position of L101 for the specified waveform shown at right.

L101
tap
Band width narrows.
Band width widens.

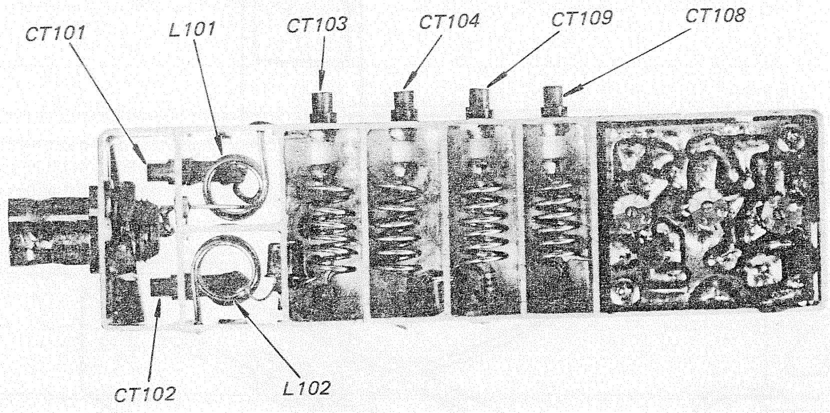
</td><td>
※ fo
marker
3 dB
13±1 MHz

</td></tr>
<tr><td>2</td><td>Fig. 1<br>Fig. 2 ⓑ</td><td>CT102<br>L102</td><td>Adjust CT104 to obtain the marker on the center of the waveform as shown at right. Adjust the coupling between L103 and L104 to obtain the specified waveform (critical coupling) as shown at right.
(If the specified waveform can not be obtained, bring L104 closer to L103 or separate L104 from L103.)

Melt here with a soldering iron to move a L102.

</td><td>
8±1 MHz
3 dB
※ fo
marker

</td></tr>
</table>

## [ADJUSTMENT LOCATION OF ANTENNA CIRCUIT]


CT101
L101
CT103
CT104
CT109
CT108
CT102
L102

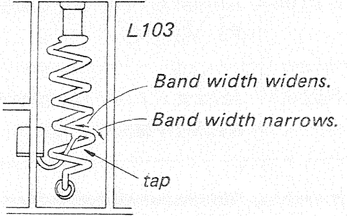
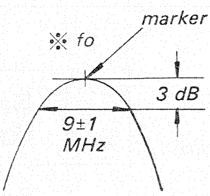
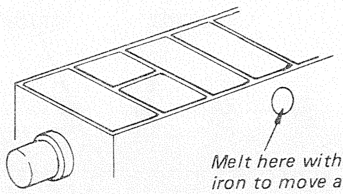
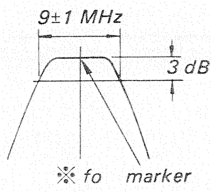
※ *fo:* receiving frequency

| CH | frequency | CH | frequency |
|---|---|---|---|
| 41 | 470.40 MHz | 47 | 481.75 MHz |
| 42 | 471.50 MHz | 48 | 482.50 MHz |
| 43 | 472.25 MHz | 49 | 484.25 MHz |
| 44 | 476.75 MHz | 50 | 485.75 MHz |
| 45 | 477.75 MHz | 51 | 487.00 MHz |
| 46 | 478.90 MHz | 52 | 488.00 MHz |

- Reference data
  Channel numbers and 1st local OSC frequency

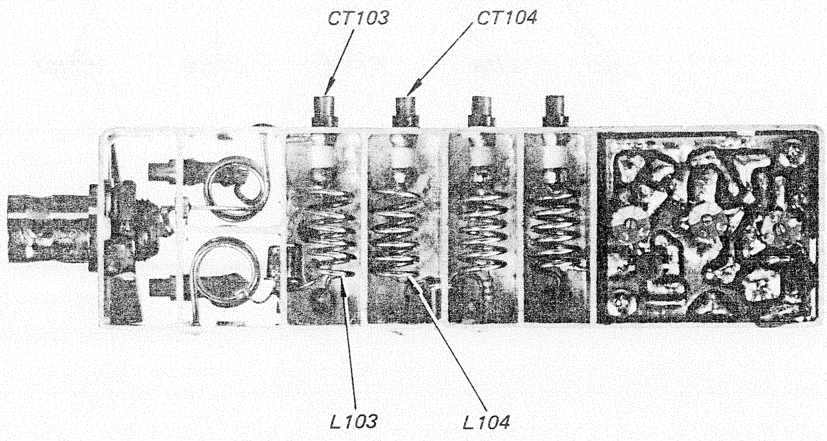
| CH | frequency | CH | frequency |
|---|---|---|---|
| 41 | 420.93 MHz | 47 | 432.28 MHz |
| 42 | 422.03 MHz | 48 | 433.03 MHz |
| 43 | 422.78 MHz | 49 | 434.78 MHz |
| 44 | 427.28 MHz | 50 | 436.28 MHz |
| 45 | 428.28 MHz | 51 | 437.53 MHz |
| 46 | 429.43 MHz | 52 | 438.53 MHz |

See pages 5 to 7 for connection diagrams.

| | Step | Connection Diagram | Adjustment Parts | Remarks | Adjustment Value |
|---|---|---|---|---|---|
| RF AMP stage Adjustment | 3 | Fig. 1<br>Fig. 2 ⓒ | CT101<br>L103 | Adjust CT103 to obtain the marker on the center of the waveform as shown at right.<br>If the specified waveform can not be obtained, adjust the tap position of L103.<br> |  |
| | 4 | Fig. 1<br>Fig. 2 ⓓ | CT104<br>L104 | Adjust CT104 to obtain the marker on the center of the waveform as shown at right.<br>Adjust the coupling between L103 and L104 to obtain the specified waveform (critical coupling) as shown at right.<br>( If the specified waveform can not be obtained, bring L104 closer to L103 or separate L104 from L103. )<br><br>Melt here with a soldering iron to move a L104. |  |

※ fo: see page 8.

[ADJUSTMENT LOCATION OF RF AMP]

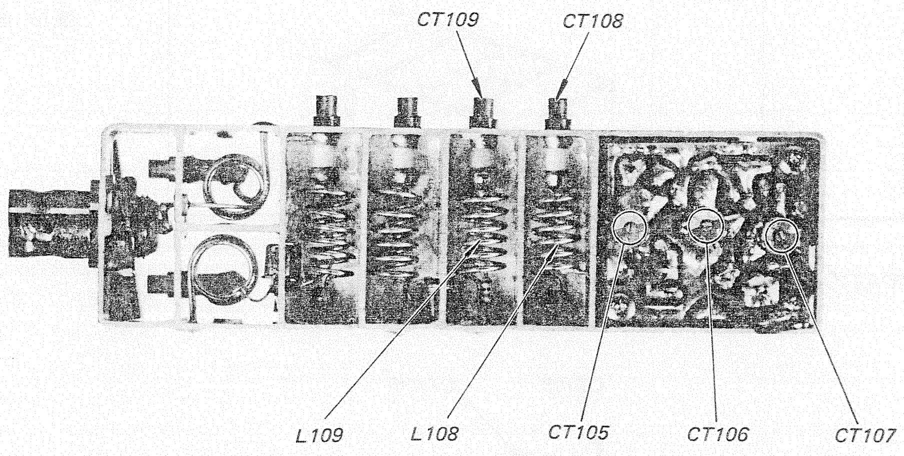


See pages 5 to 7 for connection diagrams.

| | Step | Connection Diagram | Adjustment Parts | Remarks | Adjustment Value |
|---|---|---|---|---|---|
| 1st Local OSC Adjustment | 5 | Fig. 1<br>Fig. 3 ⓐ | CT105 | Adjust CT105 for maximum reading on RF VTVM, then return CT105 for 0.05 V lower than maximum reading on RF VTVM. | |
| | 6 | Fig. 1<br>Fig. 3 ⓑ | CT106 | Adjust CT106 for maximum reading on RF VTVM. | |
| | 7 | Fig. 1<br>Fig. 3 ⓒ | CT107 | Adjust CT107 for maximum reading on RF VTVM. | |
| | 8 | Fig. 1<br>Fig. 2 ⓔ | CT108 | Adjust CT107 and CT108 so that the level of 1st Local OSC frequency* becomes maximum and the spurious response raitio becomes minimum. | |
| | | Fig. 1<br>Fig. 2 ⓕ | CT109 | | |

* 1st Local OSC frequency: see page 8.

[ADJUSTMENT LOCATION OF 1ST LOCAL OSC]



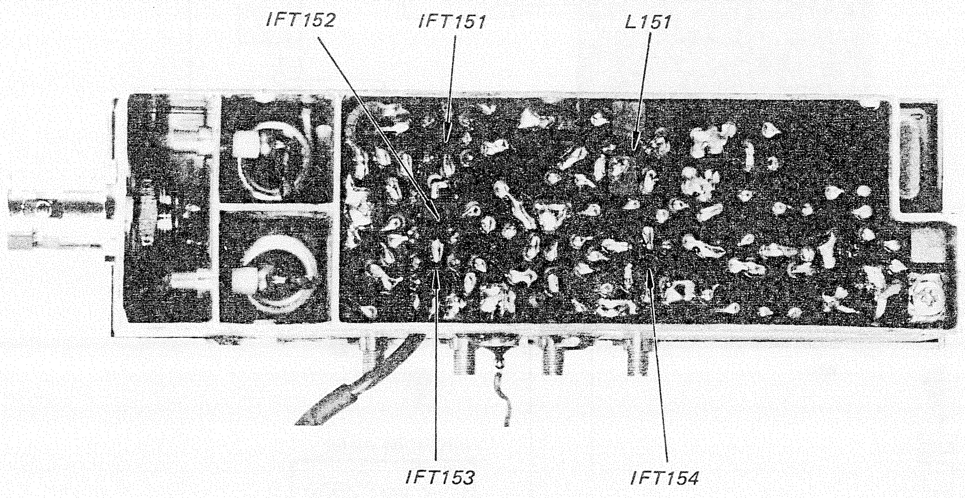
* Serial No. up to 45037: Adjustment location, adjustment parts No. and connecting location are different from Serial No.45038 and later. Refer to mounting diagrams.

| | 2nd Local OSC Adjustment | | | | |
|---|---|---|---|---|---|
| Serial No.45038 and later | L151 | IFT151 | IFT152 | IFT153 | IFT154 |
| Serial No. up to 45037 | CT130 | IFT101 | IFT102 | IFT103 | IFT104 |

**See pages 5 to 7 for connection diagrams**

| | Step | Connection Diagram | Adjust-ment Parts | Remarks | Adjustment Value |
|---|---|---|---|---|---|
| 2nd Local OSC Adjustment | 9 | Fig. 1<br>Fig. 4 | L151 | Adjust L151 so that RF VTVM reading is 0.8V.<br>(The frequency counter reading should be within the specified value.) | 0.8 ±0.01V<br>Specification: 60.17 ±0.0025 MHz. |
| | 10 | Fig. 1<br>Fig. 5 ⓐ | IFT151<br>IFT152<br>IFT153 | Adjust IFT151, IFT152 and IFT153 so that the mid point of band width becomes 49.47 MHz and output level becomes maximum. | |
| | 11 | Fig. 1<br>Fig. 5 ⓑ | IFT154<br>IFT151<br>IFT152<br>IFT153 | Adjust IFT154, IFT151, IFT152 and IFT153 so that the mid point of band width becomes 10.7 MHz and output level becomes maximum. | |
| Gain Measure-ment | 12 | Fig. 1<br>Fig. 6 | | Measure the gain when the signal is received accurately. | 43 dB ±2 dB |
| | | | L109 | If the gain does not reach 41 dB, change the tap position of L109. If it can not be obtained even after adjusting L108, repeat the adjustment from step 1. | |

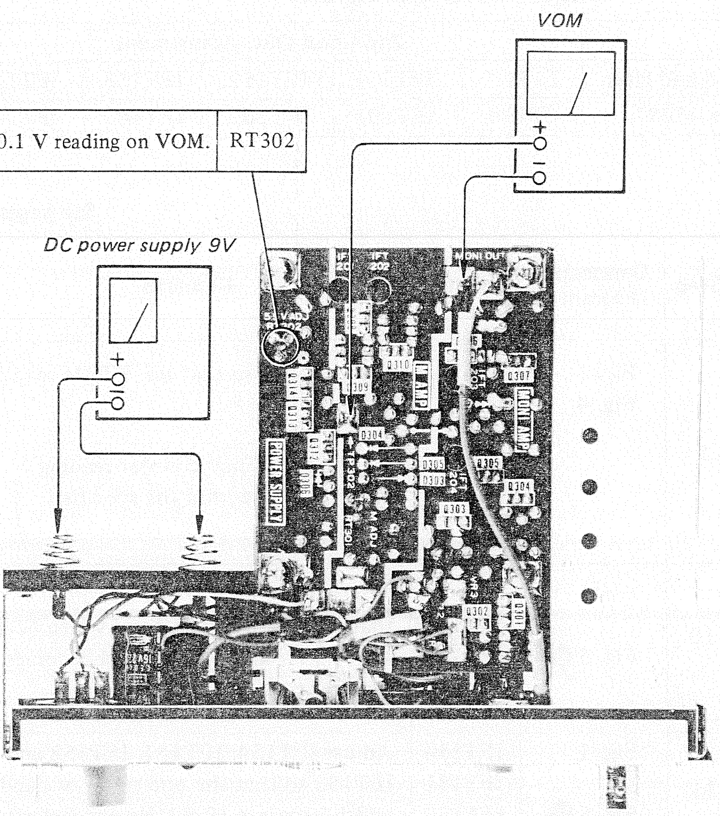
[ADJUSTMENT LOCATION OF 2ND LOCAL OSC]



* Serial No. up to 45037: Adjustment location and connecting location are different from Serial No.45038 and later. Refer to mounting diagrams.

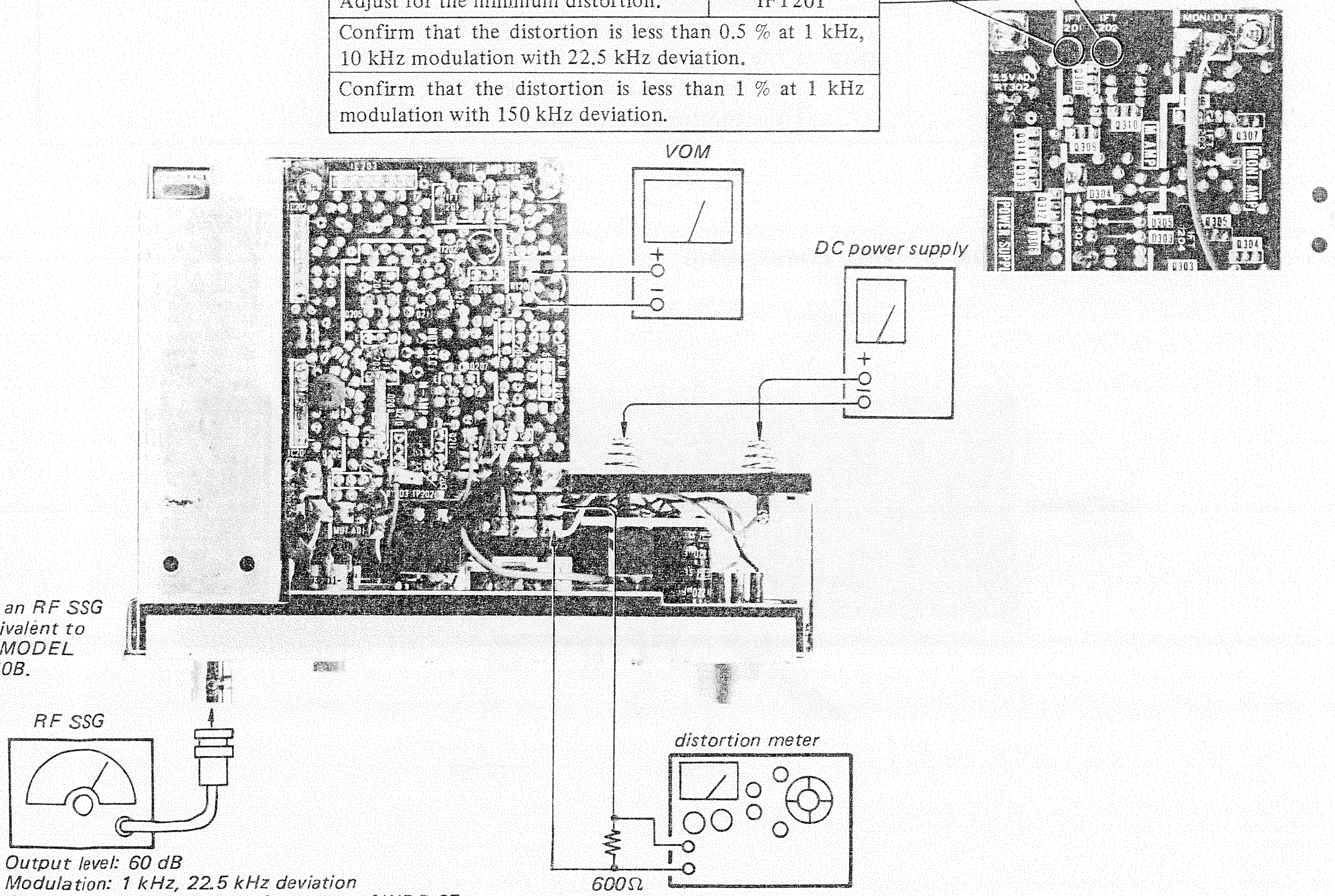
## 3-2. VOLTAGE ADJUSTMENT

| | |
|---|---|
| Adjust for 5.5 ±0.1 V reading on VOM. | RT302 |



## 3-3. DISCRIMINATOR ALIGNMENT

| | |
|---|---|
| Adjust for 0 V reading on VOM. | IFT202 |
| Adjust for the minimum distortion. | IFT201 |
| Confirm that the distortion is less than 0.5 % at 1 kHz, 10 kHz modulation with 22.5 kHz deviation. | |
| Confirm that the distortion is less than 1 % at 1 kHz modulation with 150 kHz deviation. | |



Use an RF SSG equivalent to HP MODEL 8640B.

Output level: 60 dB
Modulation: 1 kHz, 22.5 kHz deviation
Carrier frequency: receiving frequency of WRR-27

* Serial No. up to 45037: Adjustment location and connecting location are different from Serial No.45038 and later.
Refer to mounting diagrams.

### 3-4. RF LEVEL METER CALIBRATION

| | |
|---|---|
| Set the meter mode selector to the RF position and adjust for maximum reading on the meter. (SSG output level: 10 – 20 dB) | IFT204<br>IFT203 |
| Set the output level of RF SSG to maximum and adjust for the specified pointer position (see figure below) on the meter. (SSG output level: 60 dB) | RT202 |

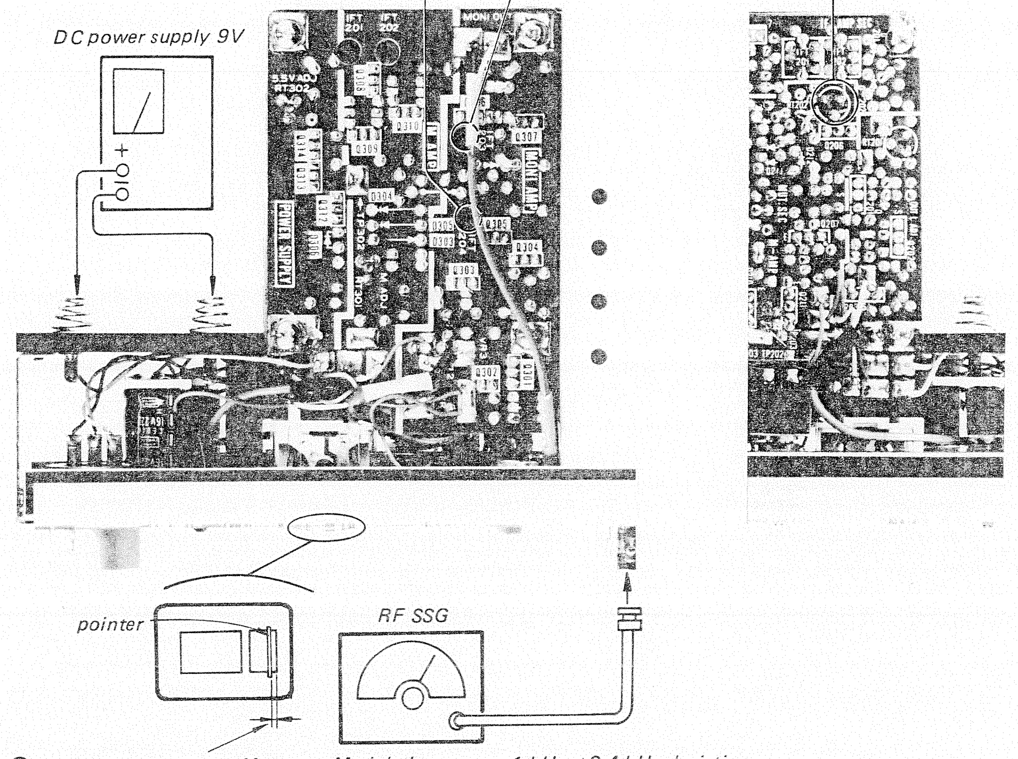
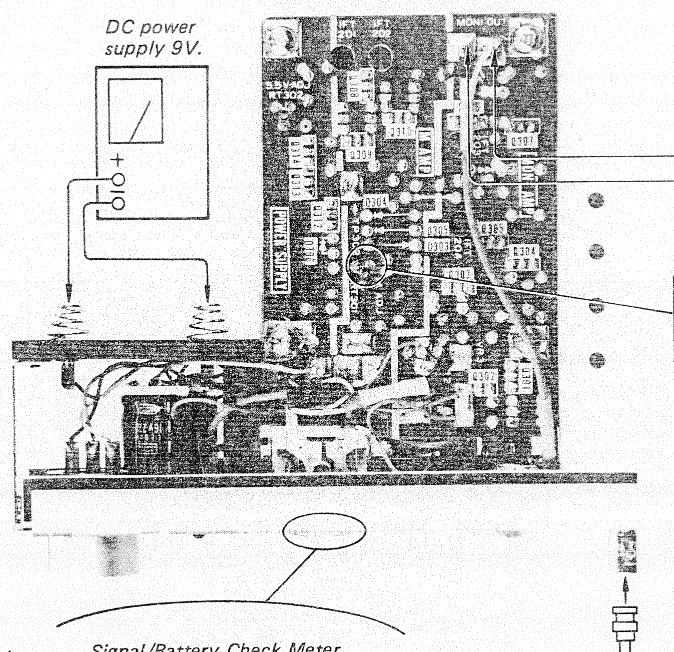
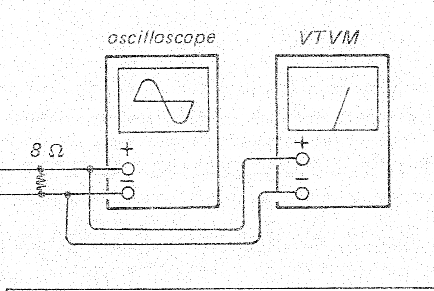

DC power supply 9V
+
–
pointer
RF SSG

Fig. ⓐ Signal/Battery Check Meter

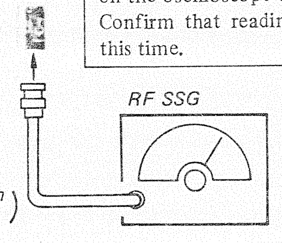
| | |
|---|---|
| Modulation: | 1 kHz, ±2.4 kHz deviation |
| Carrier frequency: | receiving frequency level of WRR-27 [0dB=1µV] |

### 3-5. AF LEVEL METER CALIBRATION


DC power supply 9V.
+
–
Signal/Battery Check Meter


oscilloscope
VTVM
8 Ω
+
–

| | |
|---|---|
| Set the meter mode selector to the AF position and adjust for the pointer position on the meter as shown in fig ⓐ. | RT301 |
| Set the meter mode selector to the BATT position and confirm that the pointer position on the meter is as shown in fig. ⓑ . | |
| Confirm that VTVM reading is more than 0.2 V. | |
| Turn up the modulation on SSG, so that the waveform on the oscilloscope becomes maximum and not clipped. Confirm that reading on VTVM is more than 0.49 V at this time. | |



| | |
|---|---|
| Modulation: | 1 kHz, ±3.0 kHz deviation |
| Carrier frequency: | receiving frequency level of WRR-27 |
| Output level: | 60 dB [0 dB=1 µV] |

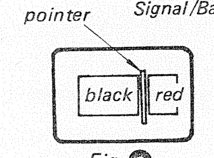

pointer
black
red

Fig. ⓐ

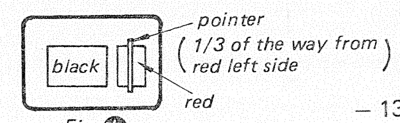
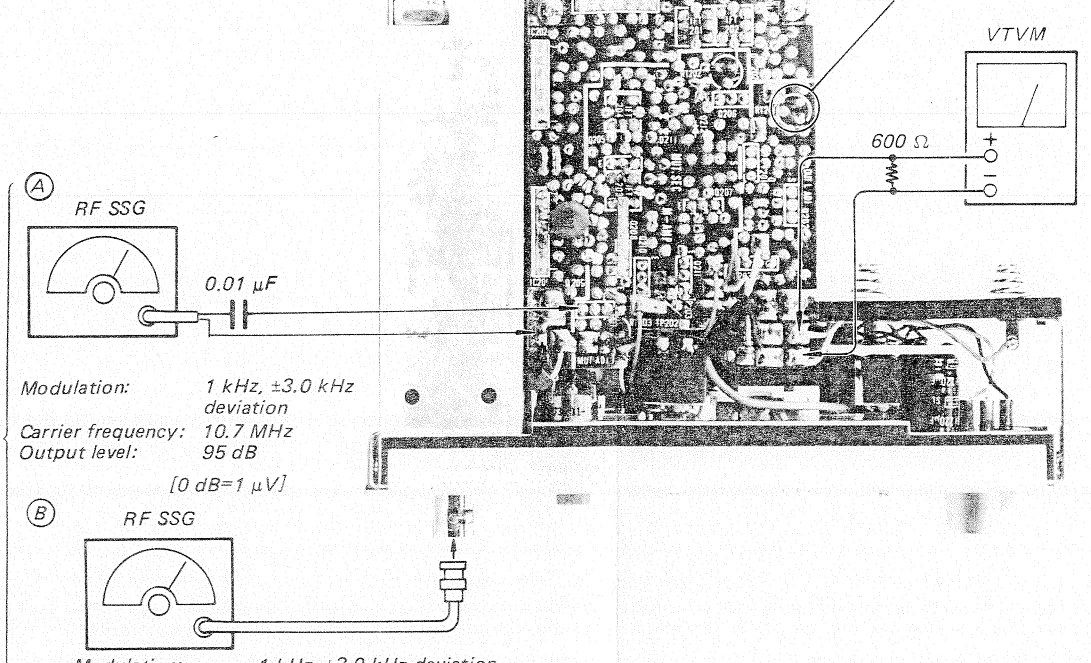

pointer
(1/3 of the way from red left side)
black
red

Fig. ⓑ

* Serial No. up to 45037: Adjustment location and connecting location are different from Serial No.45038 and later.
Refer to mounting diagrams.

### 3-6. LINE OUTPUT LEVEL ADJUSTMENT

| | |
|---|---|
| RT201 | Adjust for –64 dBm ±1 dBm reading on VTVM. |


VTVM
600 Ω
+
–
Ⓐ
RF SSG
0.01 µF
Ⓑ
RF SSG

Choose the RF SSG Ⓐ or Ⓑ by carrier frequency level.

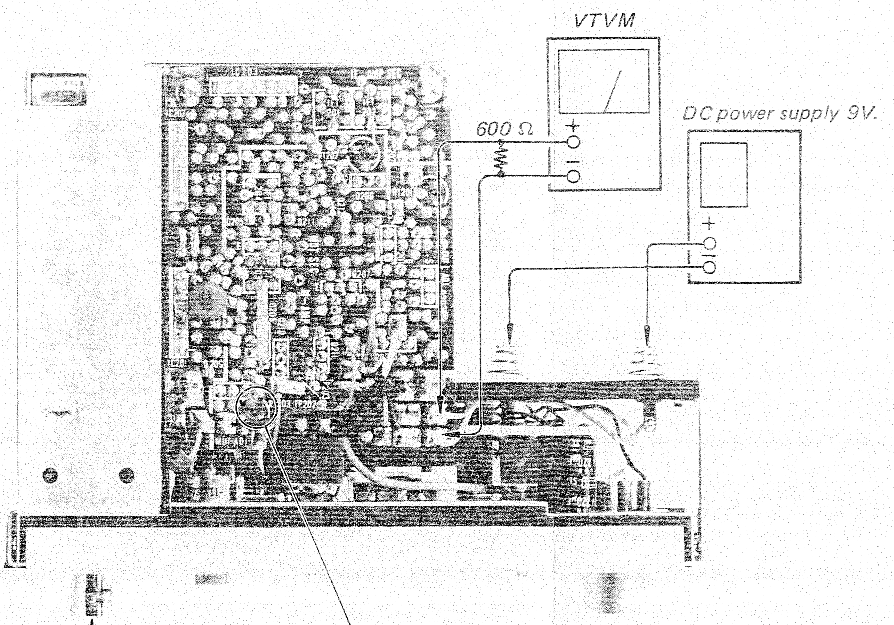
Ⓐ

| | |
|---|---|
| Modulation: | 1 kHz, ±3.0 kHz deviation |
| Carrier frequency: | 10.7 MHz |
| Output level: | 95 dB [0 dB=1 µV] |

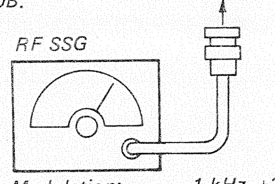
Ⓑ

| | |
|---|---|
| Modulation: | 1 kHz, ±3.0 kHz deviation |
| Carrier frequency: | receiving frequency of WRR-27 |
| Output level: | 60 dB |

### 3-7. MUTING LEVEL ADJUSTMENT


VTVM
600 Ω
+
–
DC power supply 9V.

Use an RF SSG equivalent to HP model 8640B.

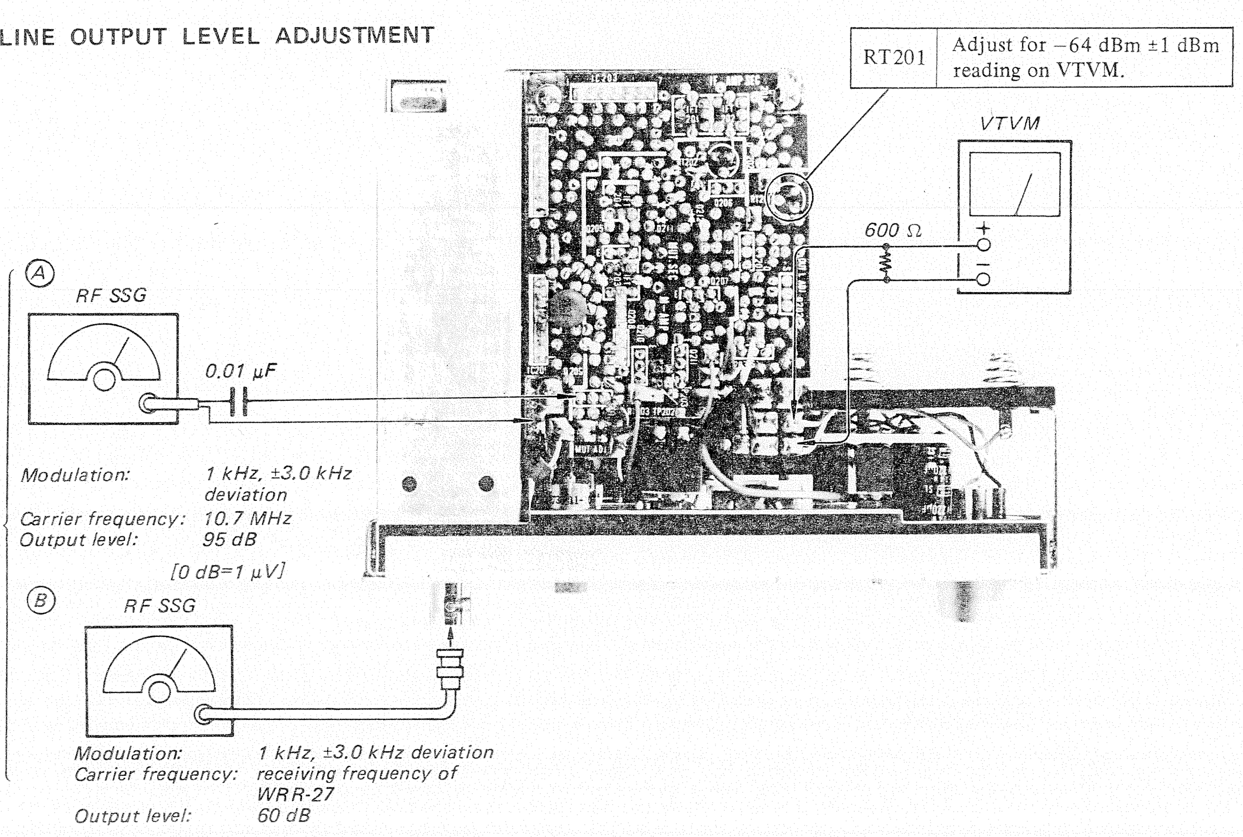


| | |
|---|---|
| Modulation: | 1 kHz, ±3.0 kHz deviation |
| Carrier frequency: | receiving frequency of WRR-27 |
| Output level: | 10 dB [0 dB=1 µV] |

| | |
|---|---|
| RT203 | Adjust for the point where the VTVM indication suddenly increases. |
| Turn off the modulation of SSG. Confirm that reading on VTVM becomes lower than 10 dB. (S/N measurement) | |

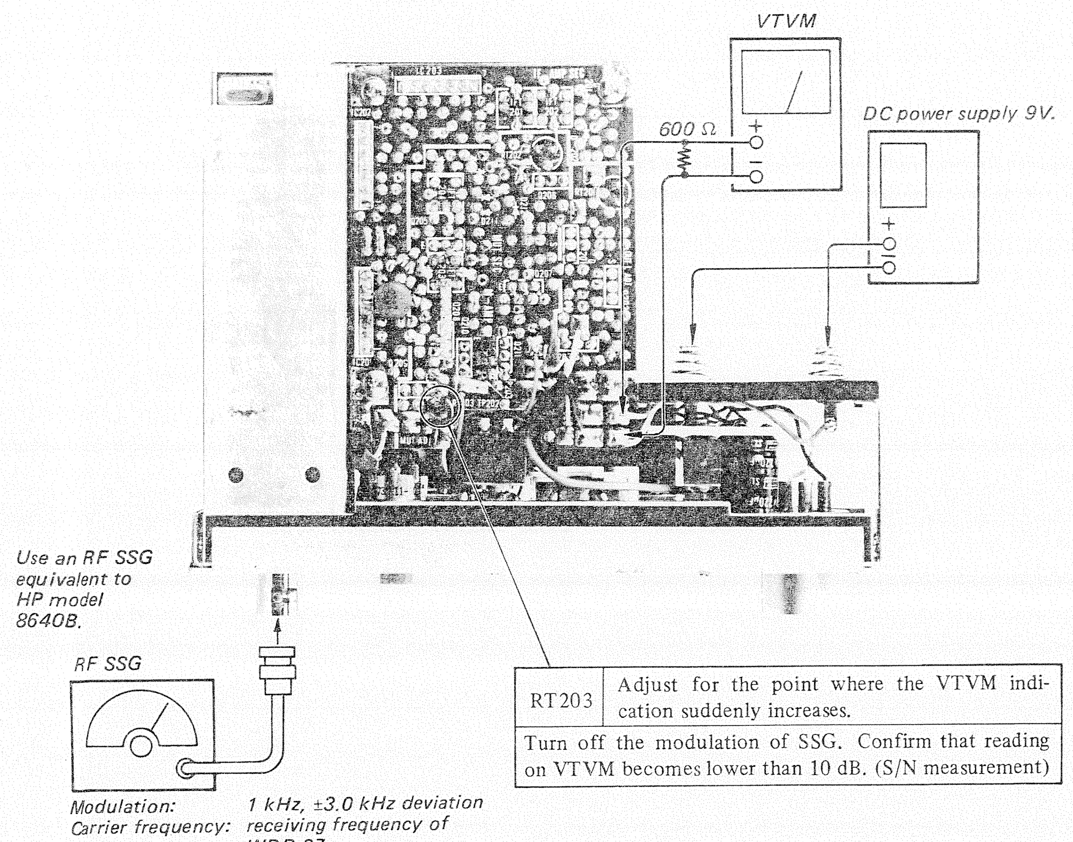
* Serial No. up to 45037: Adjustment location and connecting location are different from Serial No.45038 and later.
Refer to mounting diagrams.

## 3-6. LINE OUTPUT LEVEL ADJUSTMENT


RT201
Adjust for –64 dBm ±1 dBm reading on VTVM.
VTVM
600 Ω
+
–
Ⓐ
RF SSG
0.01 μF
Modulation: 1 kHz, ±3.0 kHz deviation
Carrier frequency: 10.7 MHz
Output level: 95 dB
[0 dB=1 μV]
Ⓑ
RF SSG
Modulation: 1 kHz, ±3.0 kHz deviation
Carrier frequency: receiving frequency of WRR-27
Output level: 60 dB

*Choose the RF SSG Ⓐ or Ⓑ by carrier frequency level.*

## 3-7. MUTING LEVEL ADJUSTMENT


VTVM
600 Ω
+
–
DC power supply 9V.
+
–
RF SSG
Modulation: 1 kHz, ±3.0 kHz deviation
Carrier frequency: receiving frequency of WRR-27
Output level: 10 dB [0 dB=1 μV]

*Use an RF SSG equivalent to HP model 8640B.*

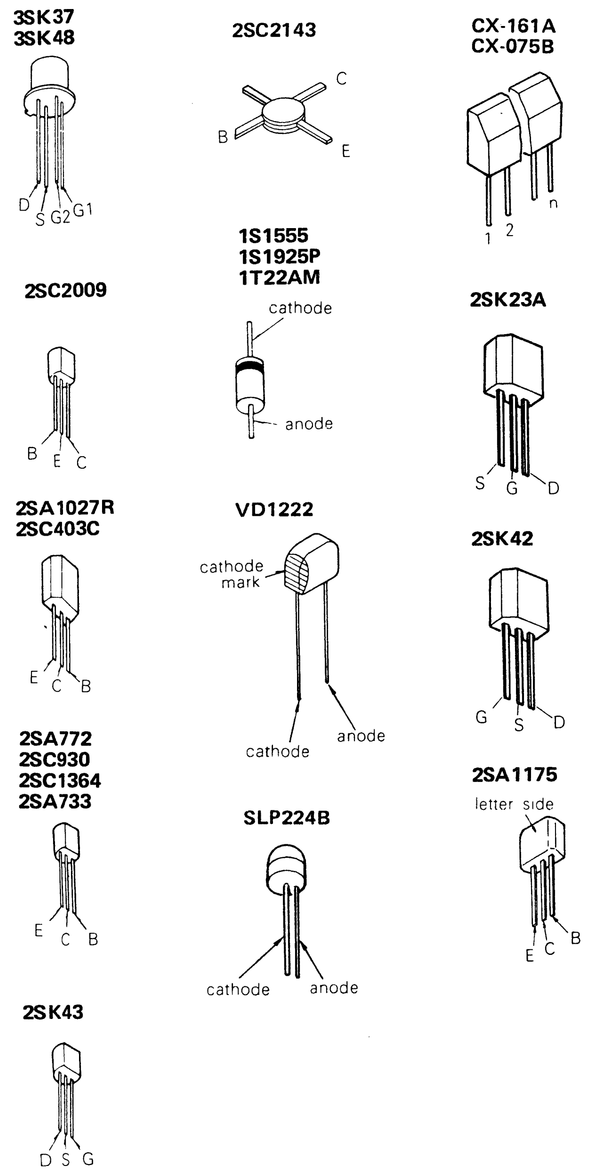
| RT203 | Adjust for the point where the VTVM indication suddenly increases. |
|---|---|
| Turn off the modulation of SSG. Confirm that reading on VTVM becomes lower than 10 dB. (S/N measurement) | |

ation
vel

# MEMO

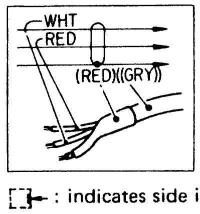
# SECTION 4 DIAGRAMS

## Semiconductor Lead Layouts


3SK37
3SK48
D
S G2 G1
2SC2143
B
C
E
CX-161A
CX-075B
1 2
n
2SC2009
B E C
1S1555
1S1925P
1T22AM
cathode
anode
2SK23A
S G D
2SA1027R
2SC403C
E C B
VD1222
cathode mark
cathode
anode
2SK42
G S D
2SA772
2SC930
2SC1364
2SA733
E C B
SLP224B
cathode
anode
2SA1175
letter side
E C B
2SK43
D S G

Note:

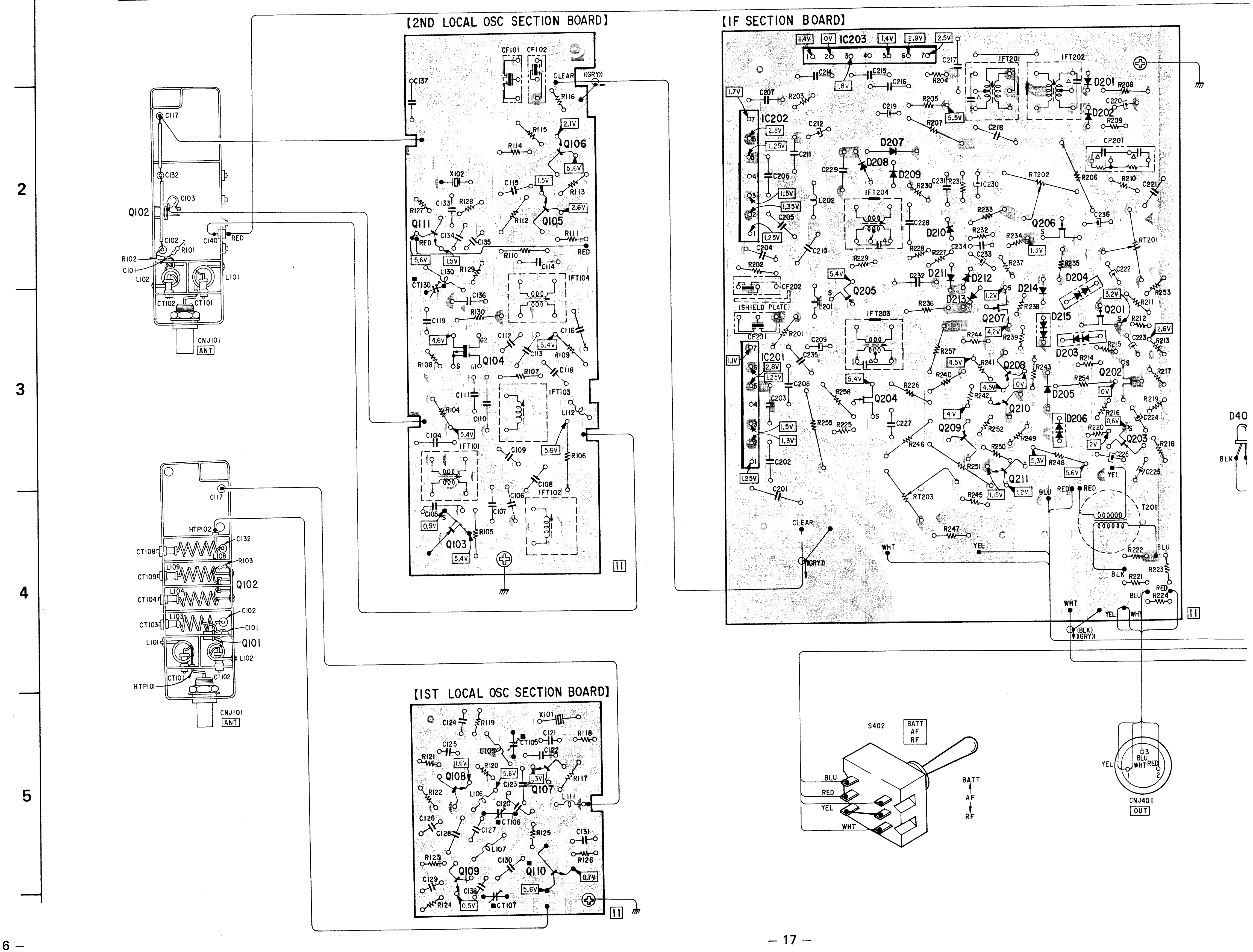
- Color code of sleeving over the end of the jacket.


WHT
RED
(RED)((GRY))

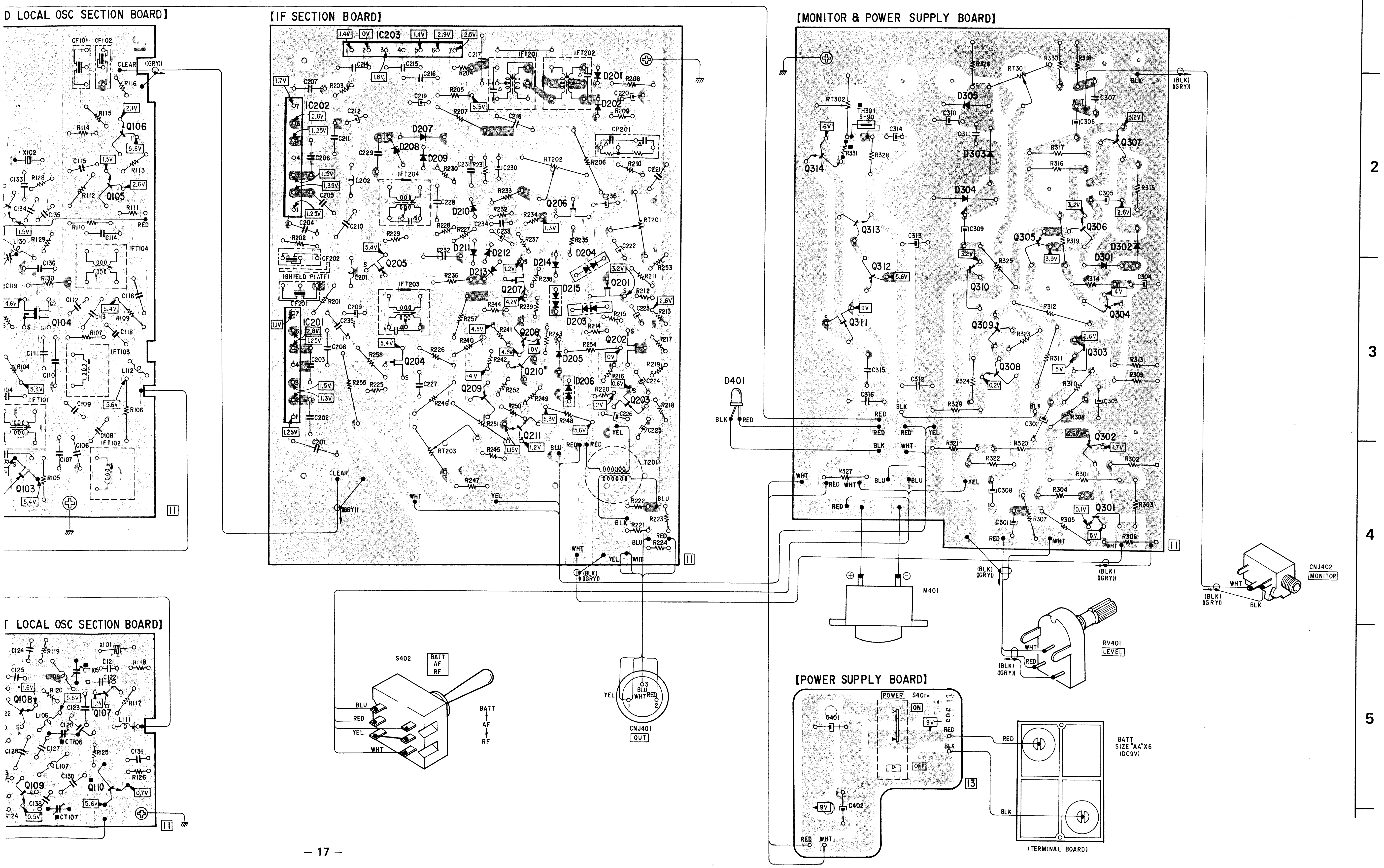
- [ ]- : indicates side identified with part number.

## 4-1. MOUNTING DIAGRAM – Serial No. up to 45037

|  |  | C | D | E | F |  |
|---|---|---|---|---|---|---|
| Q<br>IC | 102<br>101 | 111<br>108<br>109<br>103<br>104<br>107<br>110<br>106<br>105 | IC202<br>IC201 | IC203<br>205<br>204<br>209<br>207<br>208<br>210<br>211 | 206<br>201<br>202<br>203 |  |
| D |  |  |  | 208<br>207<br>209<br>210<br>211<br>212<br>213<br>214<br>215 | 205<br>204<br>203<br>206<br>201<br>202 | 4 |

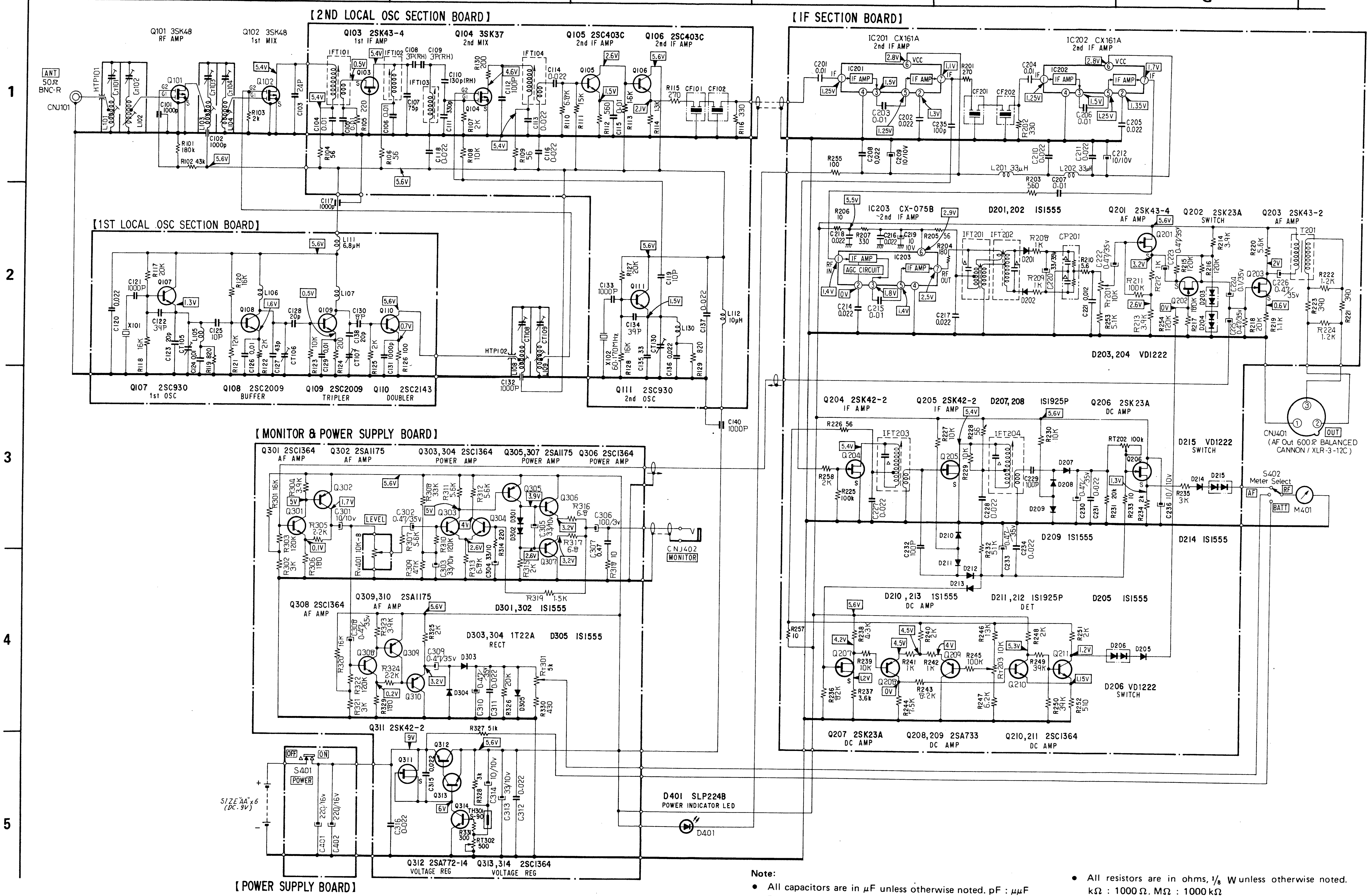

1
2
3
4
5
[2ND LOCAL OSC SECTION BOARD]
[IF SECTION BOARD]
[1ST LOCAL OSC SECTION BOARD]
Q102
Q101
CNJ101
ANT
HTP101
HTP102
C117
C132
C103
C102
C101
C140
RED
R101
R102
L101
L102
CT101
CT102
CT103
CT104
CT108
CT109
L103
L104
L108
L109
R103
CF101
CF102
CLEAR
((GRY))
Q106
Q105
Q111
Q104
Q103
X102
IFT101
IFT102
IFT103
IFT104
L130
CT130
IC203
IC202
IC201
IFT201
IFT202
IFT203
IFT204
D201
D202
D203
D204
D205
D206
D207
D208
D209
D210
D211
D212
D213
D214
D215
Q201
Q202
Q203
Q204
Q205
Q206
Q207
Q208
Q209
Q210
Q211
CF201
CF202
CP201
(SHIELD PLATE)
T201
WHT
YEL
BLU
BLK
(BLK)
((GRY))
Q107
Q108
Q109
Q110
X101
CT105
CT106
CT107
L105
L106
L107
L111
S402
BATT
AF
RF
CNJ401
OUT
D40
BLK

| | C | D | E | F | G | H | I | |
|---|---|---|---|---|---|---|---|---|
| 1<br>8<br>9 | 103<br>104<br>105<br>106<br>107<br>110 | IC202<br>IC201 | IC203<br>205<br>204<br>209<br>207<br>208<br>210<br>211 | 206<br>201<br>202<br>203 | 314<br>313<br>312<br>311 | 310<br>309<br>308<br>305<br>306<br>303<br>304<br>307<br>302<br>301 | | Q·IC |
| | | | 208<br>207<br>209<br>210<br>211<br>212<br>213<br>214<br>215 | 205<br>204<br>203<br>206<br>201<br>202 | 401 | 305<br>304<br>303<br>301<br>302 | | D |



D LOCAL OSC SECTION BOARD]
[IF SECTION BOARD]
[MONITOR & POWER SUPPLY BOARD]
T LOCAL OSC SECTION BOARD]
[POWER SUPPLY BOARD]
IC203
IC202
IC201
IFT201
IFT202
IFT203
IFT204
CP201
CF201
CF202
(SHIELD PLATE)
T201
D401
M401
S402
BATT
AF
RF
CNJ401
OUT
RV401
LEVEL
CNJ402
MONITOR
POWER
S401
ON
OFF
BATT
SIZE "AA"X6
(DC9V)
(TERMINAL BOARD)
RED
BLK
WHT
YEL
BLU
CLEAR
(GRY)
(BLK)
1
2
3
4
5
11
13

## 4-2. SCHEMATIC DIAGRAM – Serial No. up to 45037

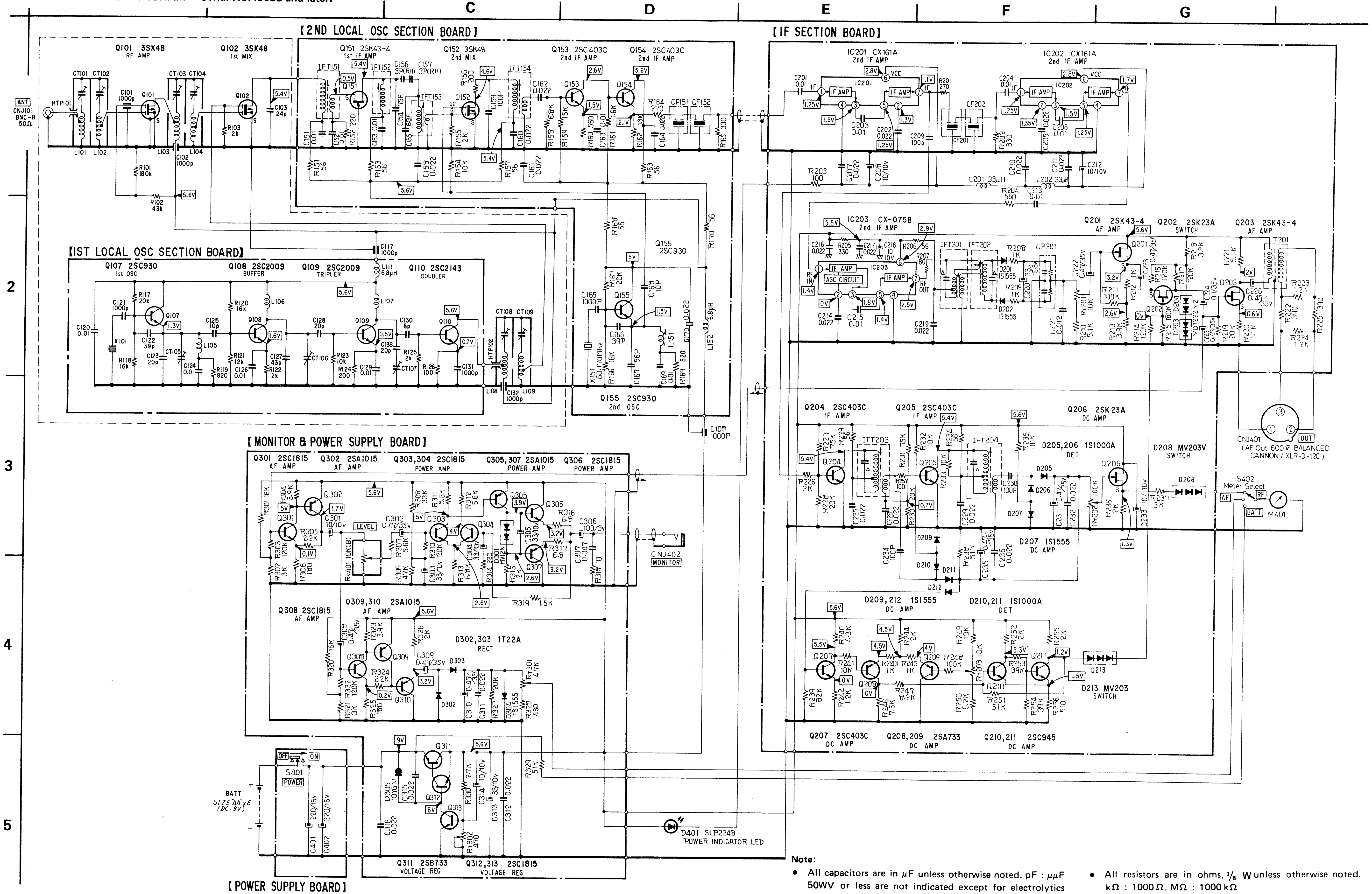

C
D
E
F
G
1
2
3
4
5
[2ND LOCAL OSC SECTION BOARD]
[1ST LOCAL OSC SECTION BOARD]
[IF SECTION BOARD]
[MONITOR & POWER SUPPLY BOARD]
[POWER SUPPLY BOARD]
Q101 3SK48 RF AMP
Q102 3SK48 1st MIX
Q103 2SK43-4 1st IF AMP
Q104 3SK37 2nd MIX
Q105 2SC403C 2nd IF AMP
Q106 2SC403C 2nd IF AMP
Q107 2SC930 1st OSC
Q108 2SC2009 BUFFER
Q109 2SC2009 TRIPLER
Q110 2SC2143 DOUBLER
Q111 2SC930 2nd OSC
IC201 CX161A 2nd IF AMP
IC202 CX161A 2nd IF AMP
IC203 CX-075B 2nd IF AMP
D201,202 IS1555
Q201 2SK43-4 AF AMP
Q202 2SK23A SWITCH
Q203 2SK43-2 AF AMP
D203,204 VD1222
Q204 2SK42-2 IF AMP
Q205 2SK42-2 IF AMP
D207,208 IS1925P
Q206 2SK23A DC AMP
D209 IS1555
D215 VD1222 SWITCH
D214 IS1555
D210,213 IS1555 DC AMP
D211,212 IS1925P DET
D205 IS1555
D206 VD1222 SWITCH
Q207 2SK23A DC AMP
Q208,209 2SA733 DC AMP
Q210,211 2SC1364 DC AMP
Q301 2SC1364 AF AMP
Q302 2SA1175 AF AMP
Q303,304 2SC1364 POWER AMP
Q305,307 2SA1175 POWER AMP
Q306 2SC1364 POWER AMP
Q308 2SC1364 AF AMP
Q309,310 2SA1175 AF AMP
D301,302 IS1555
D303,304 1T22A RECT
D305 IS1555
Q311 2SK42-2
Q312 2SA772-14 VOLTAGE REG
Q313,314 2SC1364 VOLTAGE REG
D401 SLP224B POWER INDICATOR LED
ANT 50Ω BNC-R CNJ101
CNJ402 MONITOR
CNJ401 OUT (AF Out 600Ω BALANCED CANNON / XLR-3-12C)
S402 Meter Select RF AF BATT
M401
S401 POWER OFF ON
SIZE "AA"×6 (DC 9V)
LEVEL
R401 10K-B

**Note:**

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/8 W unless otherwise noted. kΩ : 1000 Ω. MΩ : 1000 kΩ
- ▭ : panel designation.
- Readings are taken under no-signal conditions.

**Note: Voltages are measured with a VOM (50 kΩ/V).**

## 4-3. SCHEMATIC DIAGRAM – Serial No.45038 and later.

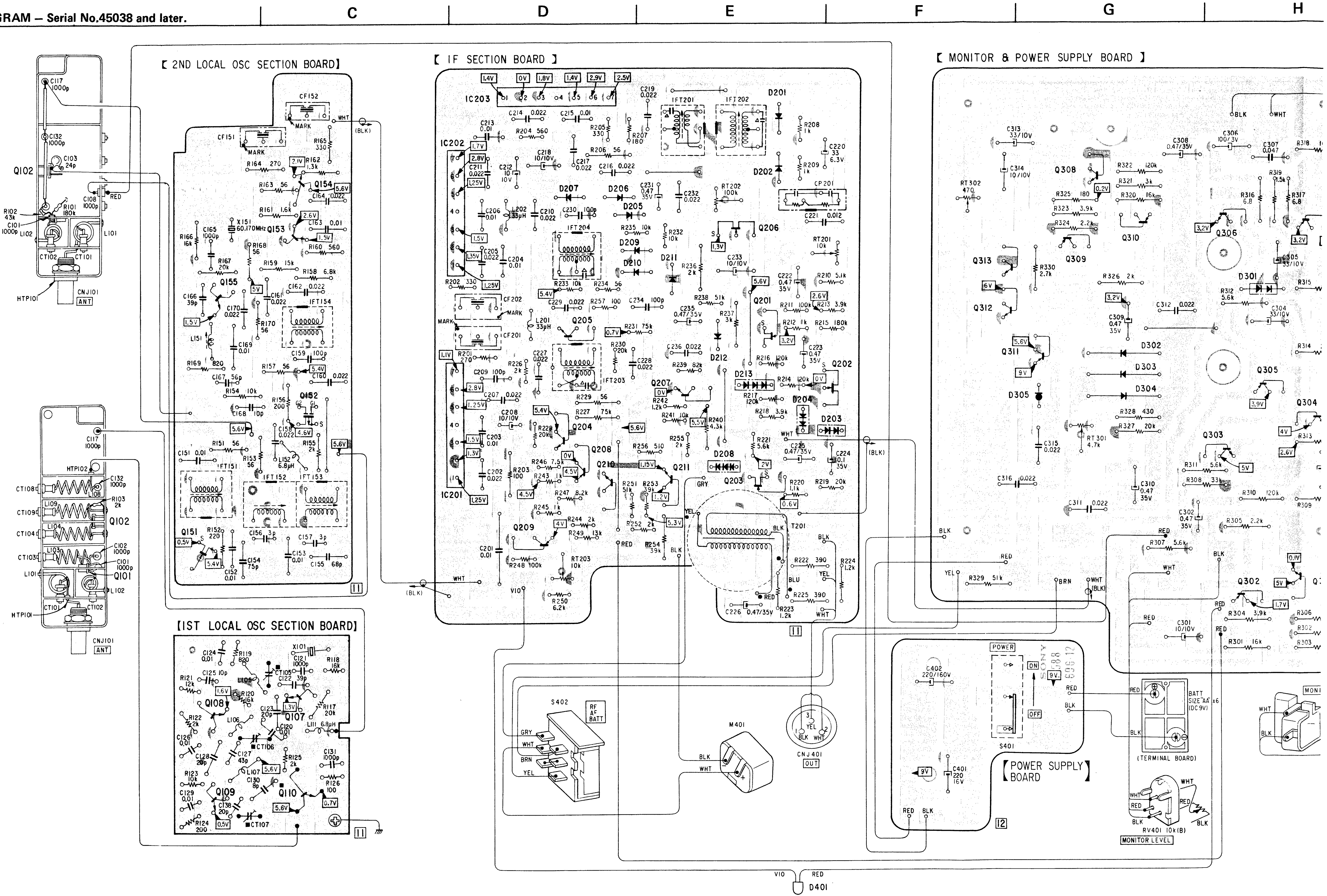

C
D
E
F
G
2
3
4
5
[2ND LOCAL OSC SECTION BOARD]
[IF SECTION BOARD]
[1ST LOCAL OSC SECTION BOARD]
[MONITOR & POWER SUPPLY BOARD]
[POWER SUPPLY BOARD]
Q101 3SK48 RF AMP
Q102 3SK48 1st MIX
Q151 2SK43-4 1st IF AMP
Q152 3SK48 2nd MIX
Q153 2SC403C 2nd IF AMP
Q154 2SC403C 2nd IF AMP
Q155 2SC930
Q155 2SC930 2nd OSC
Q107 2SC930 1st OSC
Q108 2SC2009 BUFFER
Q109 2SC2009 TRIPLER
Q110 2SC2143 DOUBLER
IC201 CX161A 2nd IF AMP
IC202 CX161A 2nd IF AMP
IC203 CX-075B 2nd IF AMP
IF AMP
AGC CIRCUIT
VCC
Q201 2SK43-4 AF AMP
Q202 2SK23A SWITCH
Q203 2SK43-4 AF AMP
Q204 2SC403C IF AMP
Q205 2SC403C IF AMP
Q206 2SK23A DC AMP
D205,206 1S1000A DET
D207 1S1555 DC AMP
D208 MV203V SWITCH
D209,212 1S1555 DC AMP
D210,211 1S1000A DET
D213 MV203 SWITCH
Q207 2SC403C DC AMP
Q208,209 2SA733 DC AMP
Q210,211 2SC945 DC AMP
Q301 2SC1815 AF AMP
Q302 2SA1015 AF AMP
Q303,304 2SC1815 POWER AMP
Q305,307 2SA1015 POWER AMP
Q306 2SC1815 POWER AMP
Q308 2SC1815 AF AMP
Q309,310 2SA1015 AF AMP
D302,303 1T22A RECT
Q311 2SB733 VOLTAGE REG
Q312,313 2SC1815 VOLTAGE REG
ANT CNJ101 BNC-R 50Ω
HTP101
HTP102
CNJ401 (AF Out 600Ω BALANCED CANNON / XLR-3-12C)
OUT
S402 Meter Select
AF
RF
BATT
M401
CNJ402 MONITOR
LEVEL
RV401 10K(B)
S401 POWER
OFF
ON
BATT SIZE "AA"×6 (DC 9V)
D401 SLP224B POWER INDICATOR LED
D305 10YG1
X151 60.170MHz
X101
IFT151
IFT152
IFT153
IFT154
IFT201
IFT202
IFT203
IFT204
CF151
CF152
CF201
CF202
CP201
L201 33μH
L202 33μH
L111 6.8μH
L152 6.8μH
C108 1000P
C117 1000p
5.6V
5.4V
9V
6V

Note:

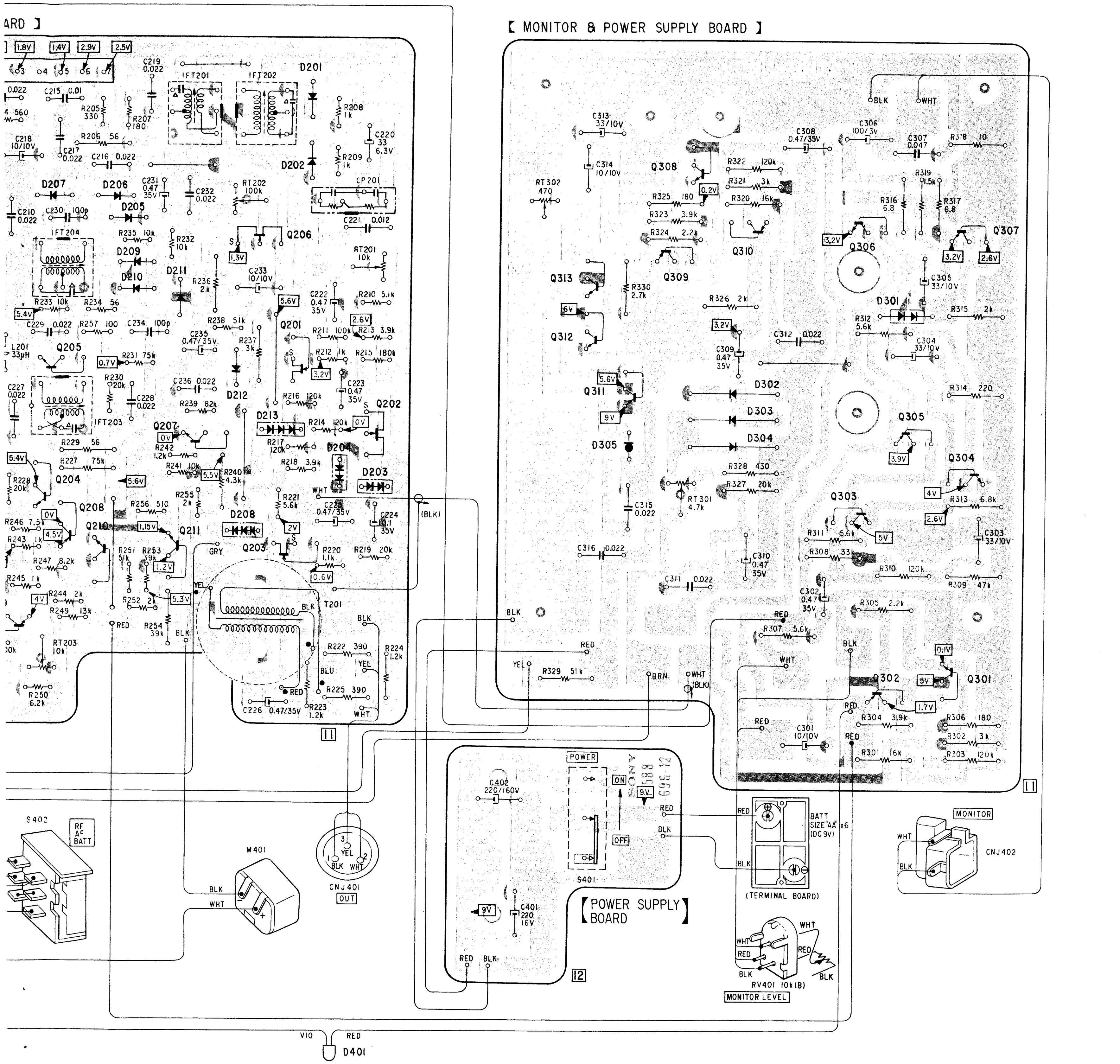
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ⅛ W unless otherwise noted. kΩ : 1000 Ω. MΩ : 1000 kΩ
- ☐ : panel designation.
- Readings are taken under no-signal conditions.

**Note: Voltages are measured with a VOM (50 kΩ/V).**

## 4-4. MOUNTING DIAGRAM – Serial No.45038 and later.

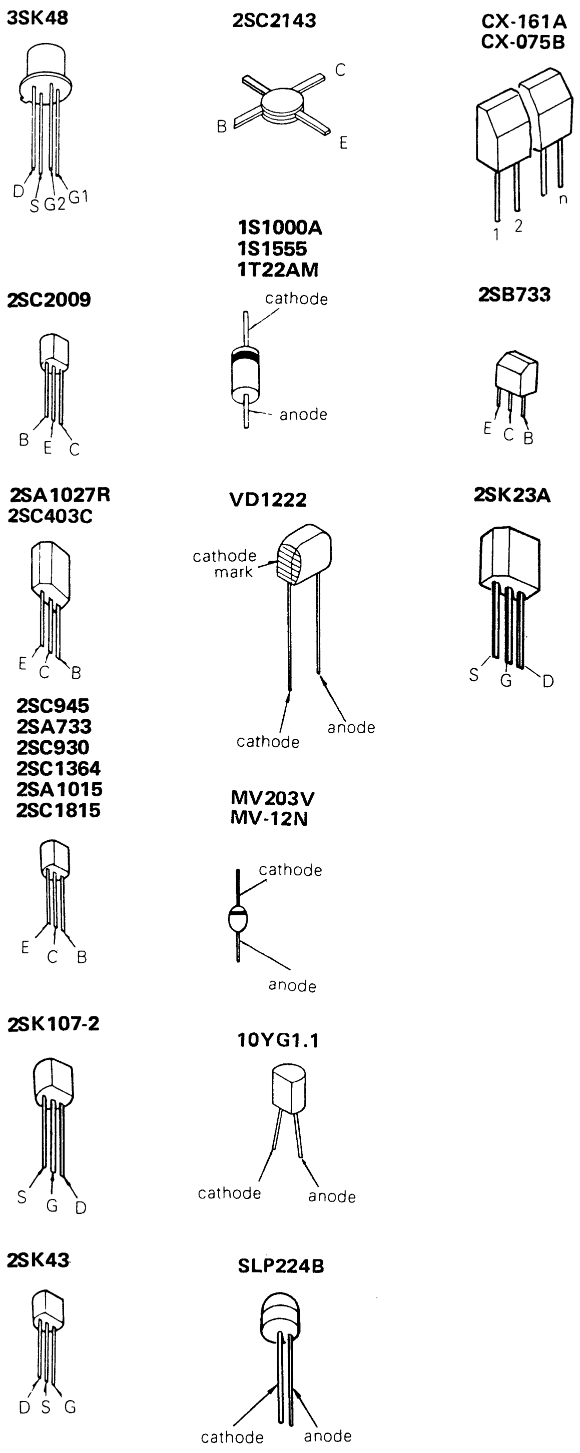

C
D
E
F
G
H
1
2
3
4
5
[ 2ND LOCAL OSC SECTION BOARD]
[ IF SECTION BOARD ]
[ MONITOR & POWER SUPPLY BOARD ]
[1ST LOCAL OSC SECTION BOARD]
[ POWER SUPPLY BOARD ]
(TERMINAL BOARD)
C117 1000p
C132 1000p
C103 24p
Q102
C108 1000p
RED
R102 43k
R101 180k
C101 1000p
L102
L101
CT102
CT101
HTP101
CNJ101
ANT
HTP102
CT108
CT109
CT104
CT103
L109
L104
L103
R103 2k
C102 1000p
Q101
CF152
CF151
MARK
WHT
(BLK)
R165 330
R164 270
R162 1.3k
R163 56
Q154
C164 0.022
R161 1.6k
C163 0.01
X151 60.170MHz
Q153
R166 16k
C165 1000p
R168 56
R160 560
R167 20k
R159 15k
R158 6.8k
Q155
C162 0.022
C166 39p
C161 0.022
IFT154
C170 0.022
R170 56
L151
C169 0.01
C159 100p
R169 820
R157 56
C160 0.022
C167 56p
R154 10k
Q152
C168 10p
R156 200
C158 0.022
R155 2k
C151 0.01
R151 56
R153 56
L152 6.8μH
IFT151
IFT152
IFT153
Q151
R152 220
C156 3p
C157 3p
C153 0.01
C155 68p
C154 75p
C152 0.01
IC203
IC202
IC201
C213 0.01
C214 0.022
C215 0.01
R204 560
R205 330
R207 180
C219 0.022
IFT201
IFT202
D201
R208 1k
C220 33 6.3V
C218 10/10V
C217 0.022
R206 56
C216 0.022
C211 0.022
C212 10 10V
R209 1k
D202
CP201
D207
D206
C231 0.47 35V
C232 0.022
RT202 100k
C206 0.01
L202 33μH
C210 0.022
C230 100p
D205
C221 0.012
IFT204
R235 10k
R232 10k
Q206
D209
RT201 10k
C205 0.022
C204 0.01
D210
D211
R236 2k
C233 10/10V
R202 330
R233 10k
R234 56
C222 0.47 35V
R210 5.1k
C229 0.022
R257 100
C234 100p
R238 51k
Q201
R211 100k
R213 3.9k
CF202
C235 0.47/35V
R237 3k
L201 33μH
Q205
R212 1k
R215 180k
CF201
R231 75k
C223 0.47 35V
R201 270
R230 20k
C236 0.022
D212
R216 120k
Q202
C227 0.022
R226 2k
C228 0.022
R239 82k
D213
R214 120k
C209 100p
IFT203
Q207
R217 120k
C207 0.022
R229 56
R242 1.2k
D204
R218 3.9k
C208 10/10V
R227 75k
R241 10k
D203
R228 20k
Q204
R240 4.3k
C203 0.01
R255 2k
R221 5.6k
C225 0.47/35V
C224 0.1 35V
R256 510
D208
Q208
R246 7.5k
Q210
Q211
Q203
R203 100
R243 1k
R220 1.1k
R219 20k
C202 0.022
R251 51k
R253 39k
GRY
R247 8.2k
R245 1k
YEL
R244 2k
T201
Q209
R249 13k
R252 2k
BLK
C201 0.01
RED
R254 39k
R222 390
R224 1.2k
R248 100k
RT203 10k
BLU
YEL
R250 6.2k
R225 390
VIO
C226 0.47/35V
R223 1.2k
C124 0.01
R119 820
X101
C121 1000p
R118 16k
C125 10p
C105
C122 39p
R121 12k
R120 16k
Q108
L105
R117 20k
R122 2k
L106
C123 20p
Q107
C120 0.01
L111 6.8μH
C126 0.01
CT106
C128 20p
C127 43p
R125 2k
C131 1000p
R123 10k
L107
C130 8p
R126 100
C129 0.01
Q109
Q110
C138 20p
R124 200
CT107
S402
RF
AF
BATT
BRN
M401
CNJ401
OUT
C402 220/160V
POWER
ON
OFF
S401
C401 220 16V
C313 33/10V
C314 10/10V
RT302 470
Q308
R322 120k
R321 3k
R325 180
R320 16k
R323 3.9k
R324 2.2k
Q310
Q313
Q309
R330 2.7k
R326 2k
Q312
C309 0.47 35V
C312 0.022
Q311
D302
D303
D304
D305
R328 430
R327 20k
RT301 4.7k
C315 0.022
C316 0.022
C310 0.47 35V
C311 0.022
C308 0.47/35V
C306 100/3V
C307 0.047
R318
R319 1.5k
R316 6.8
R317 6.8
Q306
D301
C305 33/10V
R315
R312 5.6k
C304 33/10V
R314
Q305
Q304
Q303
R313
R311 5.6k
R308 33k
C302 0.47 35V
R310 120k
R309
R305 2.2k
R307 5.6k
Q302
R304 3.9k
R306
R302
C301 10/10V
R301 16k
R303
YEL
R329 51k
BRN
BATT SIZE "AA" ×6 (DC 9V)
RV401 10k(B)
MONITOR LEVEL
MONI
D401
1.4V
0V
1.8V
2.9V
2.5V
1.7V
2.8V
1.25V
1.5V
1.35V
5.4V
0.7V
1.1V
5.6V
4.6V
1.3V
1.15V
1.2V
5.3V
0.6V
3.2V
2.6V
6V
9V
0.2V
3.9V
4V
5V
0.1V
1.7V
0.5V
2.1V
5.4V
II
I2

| | | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|
| Q<br>IC | 102<br>101 | 151<br>155<br>108<br>109 | 154<br>153<br>107<br>110<br>152 | IC202<br>IC201<br>209<br>IC203<br>204<br>205<br>208<br>210 | 211<br>207<br>206<br>201<br>203 | 202<br>313<br>312 | 311<br>309<br>308<br>310<br>303 | 306<br>302<br>305<br>301<br>307<br>304 |
| D | | | | 207<br>206<br>205<br>209<br>210 | 211<br>212<br>208<br>213<br>201<br>202<br>401 | 204<br>203 | 305<br>302<br>303<br>304 | 301 |


ARD ]
[ MONITOR & POWER SUPPLY BOARD ]
[POWER SUPPLY BOARD]
IFT201
IFT202
IFT203
IFT204
D201
D202
D203
D204
D205
D206
D207
D208
D209
D210
D211
D212
D213
Q201
Q202
Q203
Q204
Q205
Q206
Q207
Q208
Q210
Q211
T201
CP201
RT201
RT202
RT203
L201
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
Q309
Q310
Q311
Q312
Q313
D301
D302
D303
D304
D305
RT301 4.7k
RT302 470
S401
POWER
ON
OFF
9V
C401 220 16V
C402 220/160V
BATT SIZE "AA" ×6 (DC 9V)
(TERMINAL BOARD)
RV401 10k(B)
MONITOR LEVEL
MONITOR
CNJ402
CNJ401
OUT
M401
S402
RF
AF
BATT
D401
VIO
RED
BLK
WHT
YEL
BLU
BRN
GRY
SONY
1-588-606-12
11
12

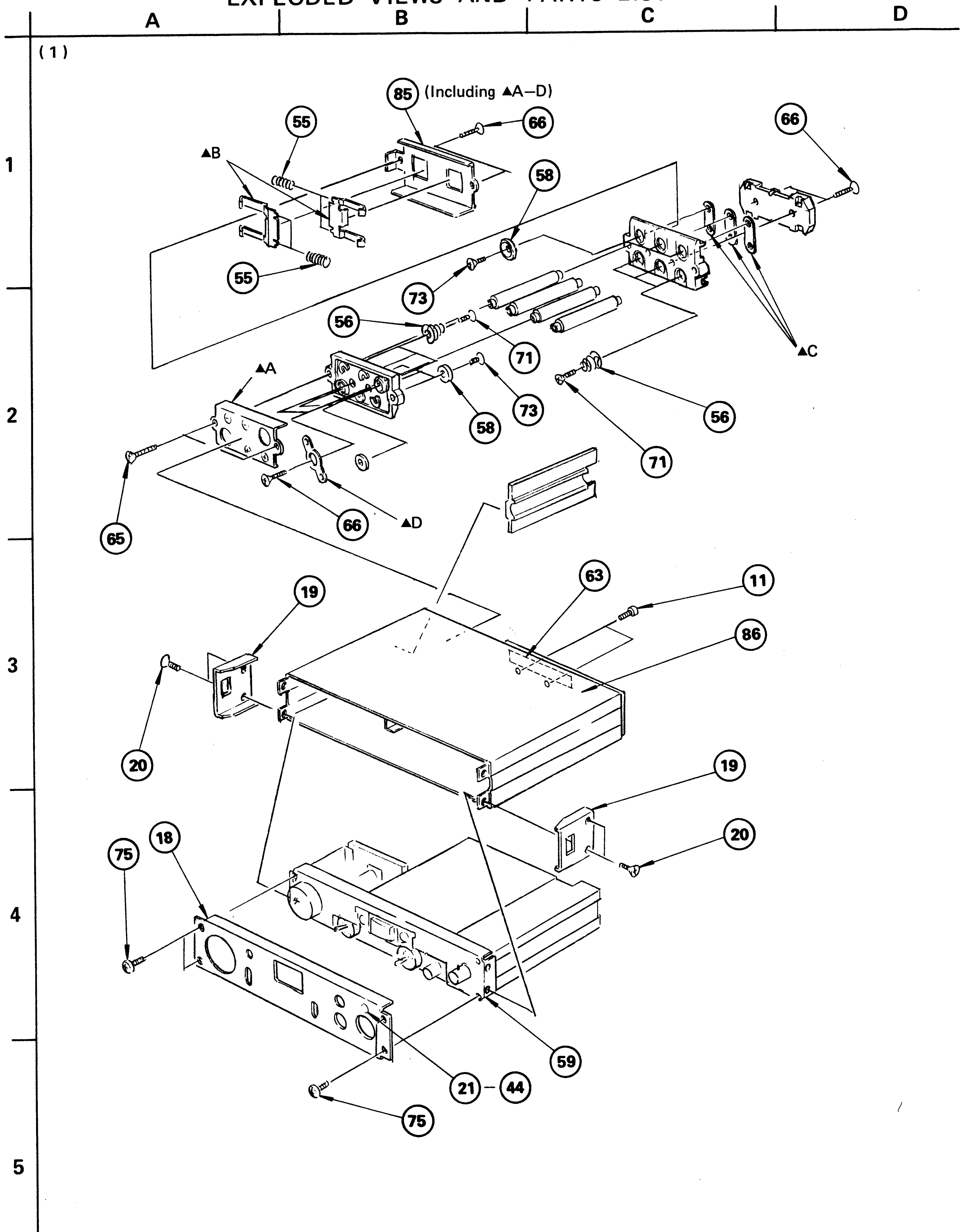
| Q·IC / D | D | E | F | G | H |
|---|---|---|---|---|---|
| Q·IC | IC203<br>09 204 205 208 210 | 211 207 206 201 203 202 | 313 312 | 311 309 308 310 | 306 303 302 305 307 304 301 |
| D | 207 206 205 209 210 | 211 212 208 213 201 202 204 401 203 | | 305 302 303 304 | 301 |

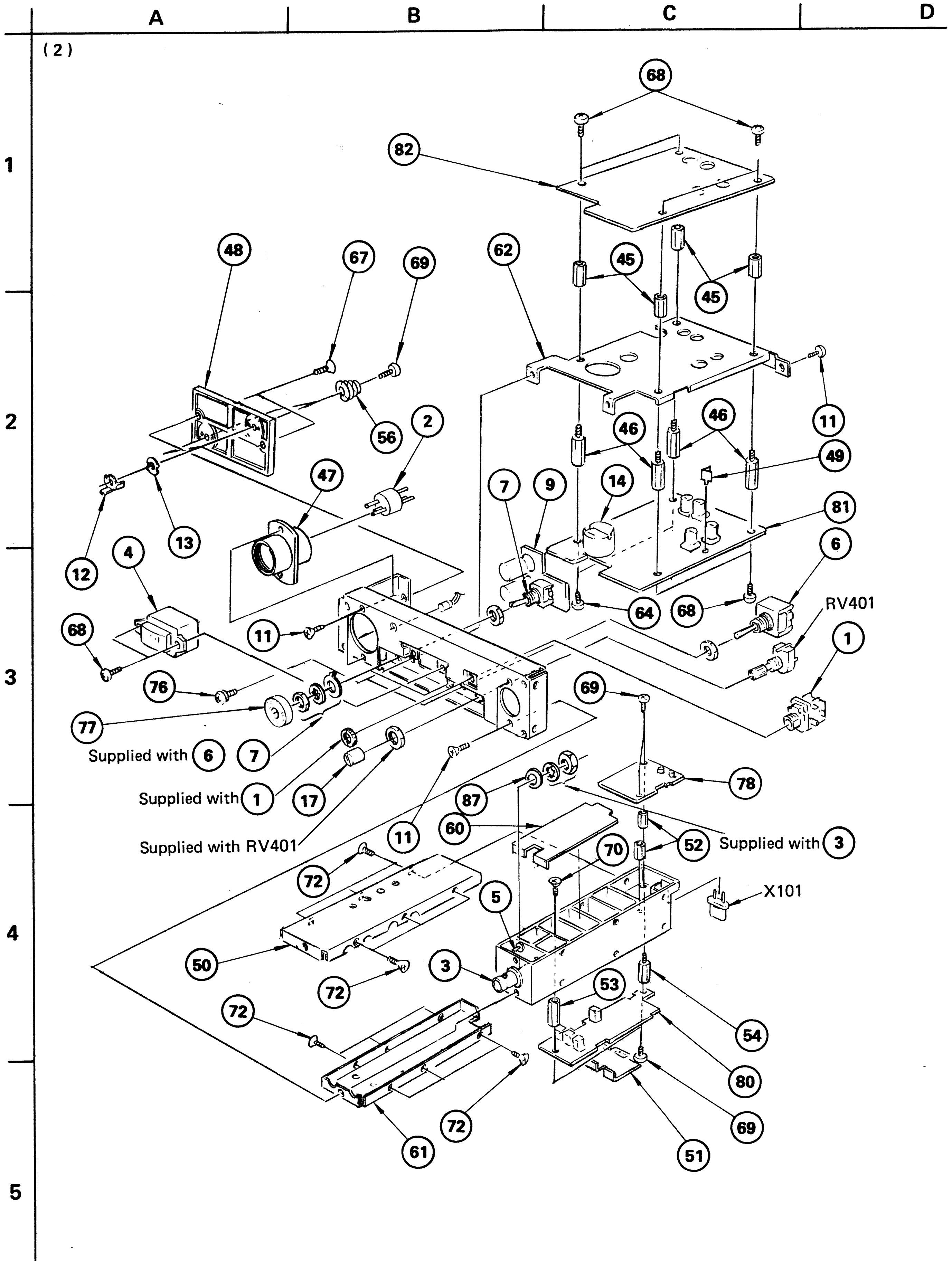
### Semiconductor Lead Layouts


3SK48
D S G2 G1
2SC2143
B C E
CX-161A
CX-075B
1 2 n
2SC2009
B E C
1S1000A
1S1555
1T22AM
cathode
anode
2SB733
E C B
2SA1027R
2SC403C
E C B
VD1222
cathode mark
cathode
anode
2SK23A
S G D
2SC945
2SA733
2SC930
2SC1364
2SA1015
2SC1815
E C B
MV203V
MV-12N
cathode
anode
2SK107-2
S G D
10YG1.1
cathode
anode
2SK43
D S G
SLP224B
cathode
anode

# SECTION 5

# EXPLODED VIEWS AND PARTS LIST


A
B
C
D
1
2
3
4
5
(1)
85 (Including ▲A–D)
66
55
▲B
58
66
55
73
56
71
▲C
▲A
58
73
56
71
65
66
▲D
63
11
19
86
20
19
20
75
18
59
21 – 44
75


A
B
C
D
1
2
3
4
5
(2)
68
82
48
67
69
62
45
45
45
11
56
2
46
46
49
47
7
9
14
81
12
13
4
6
11
64
68
RV401
68
1
76
69
77
Supplied with 6
7
Supplied with 1
17
78
87
Supplied with RV401
11
60
52
Supplied with 3
70
72
5
X101
50
3
72
53
54
72
80
72
69
61
51

NOT
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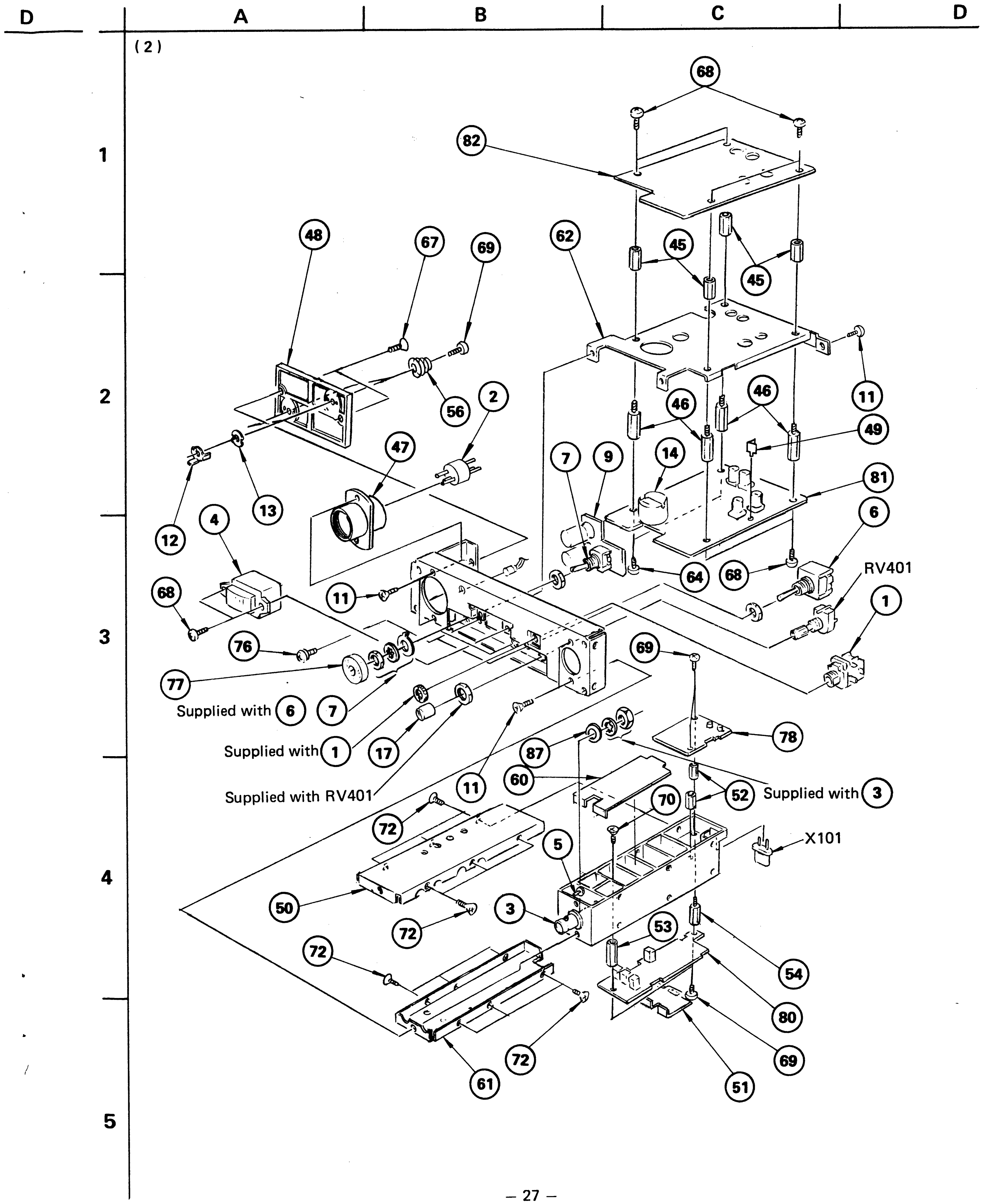
s



GENERAL SECTION

| No. | Part No. | Description |
|---|---|---|
| 1 | 1-507-412-XX | JM-35 JACK (CNJ402) |
| 2 | 1-509-096-00 | CANNON XLR3-14 PIN INSERT (CNJ401) |
| 3 | 1-561-627-00 | RECEPTACLE, BNC (CNJ101) |
| 4 | 1-524-005-01 | INDICATOR, LEVEL (M401) |
| 5 | 1-535-240-00 | TERMINAL, HERMETIC |
| 6 | 1-552-852-00 | SWITCH (S402) |
| 7 | 1-552-853-00 | SWITCH (S401) |
| 8 | ............ | |
| 9 ● | ;1-588-696-00 | PC BOARD, SWITCH |
| 10 | ............ | |
| 11 | 2-513-917-00 | SCREW |
| 12 | 2-521-310-00 | CONTACT, TERMINAL |
| 13 | 2-521-316-00 | WASHER, TERMINAL |
| 14 ● | ;2-522-011-00 | CASE, SHIELD |
| 15 | ............ | |
| 16 | ............ | |
| 17 | 2-527-010-00 | KNOB, ATTENUATOR |
| 18 ● | ;2-527-071-00 | PANEL, FRONT |
| 19 ● | ;2-527-072-00 | HANGER |
| 20 | 2-527-075-00 | SCREW |
| 21 ● | ;2-527-076-41 | EMBLEM, CHANNEL (41 CH) |
| 22 ● | ;2-527-076-42 | EMBLEM, CHANNEL (42 CH) |
| 23 ● | ;2-527-076-43 | EMBLEM, CHANNEL (43 CH) |
| 24 ● | ;2-527-076-44 | EMBLEM, CHANNEL (44 CH) |
| 25 ● | ;2-527-076-45 | EMBLEM, CHANNEL (45 CH) |
| 26 ● | ;2-527-076-46 | EMBLEM, CHANNEL (46 CH) |
| 27 ● | ;2-527-076-47 | EMBLEM, CHANNEL (47 CH) |
| 28 ● | ;2-527-076-48 | EMBLEM, CHANNEL (48 CH) |
| 29 ● | ;2-527-076-49 | EMBLEM, CHANNEL (49 CH) |
| 30 ● | ;2-527-076-50 | EMBLEM, CHANNEL (50 CH) |
| 31 ● | ;2-527-076-51 | EMBLEM, CHANNEL (51 CH) |
| 32 ● | ;2-527-076-52 | EMBLEM, CHANNEL (52 CH) |
| 45 ● | ;2-527-078-00 | SUPPORT (A), PC BOARD |
| 46 ● | ;2-527-079-00 | SUPPORT (B), PC BOARD |
| 47 ● | ;2-527-080-00 | SLEEVE, CONNECTOR |
| 48 ● | ;2-527-081-00 | BOARD, TERMINAL |
| 49 ● | ;2-527-082-00 | PARTITION |
| 50 ● | ;2-527-085-00 | COVER (A), FRAME |
| 51 ● | ;2-527-087-00 | PLATE (B), CONTACT |
| 52 ● | ;2-527-088-00 | SUPPORT (A), F.E PC BOARD |
| 53 ● | ;2-527-089-00 | SUPPORT (B), F.E PC BOARD |
| 54 ● | ;2-527-090-00 | SUPPORT (C), F.E PC BOARD |
| 55 | 2-527-096-00 | SPRING, COMPRESSION |

GENERAL SECTION

| No. | Part No. | Description |
|---|---|---|
| 56 | 2-527-097-00 | SPRING |
| 57 | ............ | |
| 58 | 2-527-098-00 | TERMINAL, POSITIVE |
| 59 ● | ;2-527-506-00 | PANEL, SUB |
| 60 ● | ;2-527-507-00 | PLATE (A), CONTACT |
| 61 ● | ;2-527-086-00 | COVER (B), FRAME |
| 62 ● | ;2-527-557-00 | CHASSIS |
| 63 | 2-527-074-00 | LABEL, MODEL NUMBER |
| 64 | 7-621-259-25 | SCREW +P 2.6X4 |
| 65 | 7-621-555-50 | SCREW +K 2X8 |
| 66 | 7-621-555-52 | SCREW +K 2X8 |
| 67 | 7-621-592-00 | SCREW +K 2.6X6 |
| 68 | 7-621-770-87 | SCREW +B 2.6X5 |
| 69 | 7-621-771-06 | SCREW +B 2X5 |
| 70 | 7-627-452-17 | SCREW, PRECISION +K 2X3 |
| 71 | 7-621-772-08 | SCREW +B 2X3 |
| 72 | 7-627-452-07 | SCREW, PRECISION +K 2X2 |
| 73 | 7-621-555-22 | SCREW +K 2X4 |
| 74 | ............ | |
| 75 | 7-627-553-27 | SCREW, PRECISION +P 2X2.5 |
| 76 | 7-628-254-00 | SCREW +PS 2.6X5 |
| 77 | 9-911-815-01 | BLIND, SWITCH |
| 78 ● | ;A-4518-094-A | MOUNTED PCB, LOCAL OSC (1ST) |
| 79 | ............ | |
| 80 ● | ;A-4518-125-A | MOUNTED PCB, OSC, LOCAL |
| 81 ● | ;A-4518-126-A | MOUNTED PCB, IF |
| 82 ● | ;A-4518-127-A | MOUNTED PCB, MONITOR |
| 83 | ............ | |
| 84 | ............ | |
| 85 | A-4521-004-A | CASE ASSY, BATTERY |
| 86 ● | ;X-2527-002-0 | COVER ASSY, CASE |
| 87 ● | ;2-527-083-00 | SPACER |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ● " are not stocked since thev are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
  MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ACCESSORY & PACKING MATERIAL

| No. | Part No. | Description |
|---|---|---|
| 101 | 1-501-203-00 | ANTENNA |
| 102 | 1-504-059-11 | MAGNETIC EARPHONE(ME-20H) |
| 103 | 2-527-031-00 | INDIVIDUAL CARTON |
| 104 | 2-527-032-00 | SPACER |
| 105 | 2-527-033-00 | CUSHION |
| 106 | 2-527-503-00 | BELT, SHOULDER |
| 107 | 2-527-504-00 | CASE, EARPHONE |
| 108 | 2-527-511-00 | CASE, LEATHER |
| 109 ♠ | ;2-527-514-41 | SEAL, CHANNEL (41 CH) |
| 110 ♠ | ;2-527-514-42 | SEAL, CHANNEL (42 CH) |
| 111 ♠ | ;2-527-514-43 | SEAL, CHANNEL (43 CH) |
| 112 ♠ | ;2-527-514-44 | SEAL, CHANNEL (44 CH) |
| 113 ♠ | ;2-527-514-45 | SEAL, CHANNEL (45 CH) |
| 114 ♠ | ;2-527-514-46 | SEAL, CHANNEL (46 CH) |
| 115 ♠ | ;2-527-514-47 | SEAL, CHANNEL (47 CH) |
| 116 ♠ | ;2-527-514-48 | SEAL, CHANNEL (48 CH) |
| 117 ♠ | ;2-527-514-49 | SEAL, CHANNEL (49 CH) |
| 118 ♠ | ;2-527-514-50 | SEAL, CHANNEL (50 CH) |
| 119 ♠ | ;2-527-514-51 | SEAL, CHANNEL (51 CH) |
| 120 ♠ | ;2-527-514-52 | SEAL, CHANNEL (52 CH) |
| 121 | 2-599-126-11 | MANUAL, INSTRUCTION |
| 122 | 3-701-363-00 | LABEL, TACK |
| 123 | 3-701-617-00 | BAG, POLYETHYLENE |
| 124 | 3-701-619-00 | BAG, POLYETHYLENE, STANDARD |
| 125 | 3-701-623-00 | BAG, POLYETHYLENE |
| 126 | 3-701-625-00 | BAG, POLYETHYLENE |

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| C101 | 1-161-857-00 | CAP, CERAMIC | 1000PF | | |
| C102 | 1-161-857-00 | CAP, CERAMIC | 1000PF | | |
| C103 | 1-102-672-00 | CAP, CERAMIC | 24PF RH | | |
| C117 | 1-161-857-00 | CAP, CERAMIC | 1000PF | | |
| C132 | 1-161-857-00 | CAP, CERAMIC | 1000PF | | |
| C140 | 1-161-857-00 | CAP, CERAMIC | 1000PF | | |
| C154 | 1-102-859-00 | CERAMIC | 75PF | 5% | 50V |
| C155 | 1-102-676-00 | CERAMIC | 68PF | 5% | 50V |
| C156 | 1-102-862-00 | CERAMIC | 3PF | 0.25PF | 50V |
| C157 | 1-102-862-00 | CERAMIC | 3PF | 0.25PF | 50V |
| C159 | 1-102-678-21 | CERAMIC | 100PF | 5% | 50V |
| C167 | 1-102-850-21 | CERAMIC | 56PF | 5% | 50V |
| C201 | 1-161-051-00 | CERAMIC | 0.01MF | 30% | 25V |
| C203 | 1-161-051-00 | CERAMIC | 0.01MF | 30% | 25V |
| C204 | 1-161-051-00 | CERAMIC | 0.01MF | 30% | 25V |
| C206 | 1-161-051-00 | CERAMIC | 0.01MF | 30% | 25V |
| C208 | 1-131-377-00 | TANTALUM | 10MF | 10% | 10V |
| C212 | 1-131-377-00 | TANTALUM | 10MF | 10% | 10V |
| C213 | 1-161-051-00 | CERAMIC | 0.01MF | 30% | 25V |
| C215 | 1-161-051-00 | CERAMIC | 0.01MF | 30% | 25V |
| C218 | 1-131-377-00 | TANTALUM | 10MF | 10% | 10V |
| C220 | 1-131-386-00 | TANTALUM | 33MF | 10% | 6.3V |
| C224 | 1-131-341-00 | TANTALUM | 0.1MF | 10% | 35V |
| C233 | 1-131-377-00 | TANTALUM | 10MF | 10% | 10V |
| C301 | 1-131-377-00 | TANTALUM | 10MF | 10% | 10V |
| C303 | 1-131-380-00 | TANTALUM | 33MF | 10% | 10V |
| C304 | 1-131-380-00 | TANTALUM | 33MF | 10% | 10V |
| C305 | 1-131-380-00 | TANTALUM | 33MF | 10% | 10V |
| C306 | 1-131-395-00 | TANTALUM | 100MF | 10% | 3.15V |
| C313 | 1-131-380-00 | TANTALUM | 33MF | 10% | 10V |
| C314 | 1-131-377-00 | TANTALUM | 10MF | 10% | 10V |
| CF151 | 1-527-358-00 | FILTER, CERAMIC | | | |
| CF152 | 1-527-358-00 | FILTER, CERAMIC | | | |
| CF201 | 1-527-358-00 | FILTER, CERAMIC | | | |
| CF202 | 1-527-358-00 | FILTER, CERAMIC | | | |
| CP201 | 1-231-202-00 | CR ENCAPSULATED COMPONENT | | | |
| CT105 | 1-141-224-00 | CAP, TRIMMER | | | |
| CT106 | 1-141-224-00 | CAP, TRIMMER | | | |
| CT107 | 1-141-224-00 | CAP, TRIMMER | | | |
| D201 | 8-719-815-55 | DIODE 1S1555 | | | |
| D202 | 8-719-815-55 | DIODE 1S1555 | | | |
| D203 | 8-719-122-20 | DIODE VD1222 | | | |
| D204 | 8-719-122-20 | DIODE VD1222 | | | |
| D205 | 8-719-422-21 | DIODE 1T22AM | | | |
| D206 | 8-719-422-21 | DIODE 1T22AM | | | |

NOTE:

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- Items marked " ♠ " are not stocked since thev are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

## ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---|---|---|
| D207 | 8-719-815-55 | DIODE 1S1555 |
| D208 | 8-719-920-30 | DIODE MV203V |
| D209 | 8-719-815-55 | DIODE 1S1555 |
| D210 | 8-719-422-21 | DIODE 1T22AM |
| D211 | 8-719-422-21 | DIODE 1T22AM |
| D212 | 8-719-815-55 | DIODE 1S1555 |
| D213 | 8-719-920-30 | DIODE MV203V |
| D301 | 8-719-912-00 | DIODE MV12N |
| D302 | 8-719-422-21 | DIODE 1T22AM |
| D303 | 8-719-422-21 | DIODE 1T22AM |
| D304 | 8-719-815-55 | DIODE 1S1555 |
| D305 | 8-719-201-11 | DIODE 10YG1.1 |
| D401 | 8-719-902-24 | DIODE SLP224B |
| IC201 | 8-759-601-61 | IC CX-161A |
| IC202 | 8-759-601-61 | IC CX-161A |
| IC203 | 8-759-600-75 | IC CX-075B |
| ♠ IFT151 | ;1-404-193-00 | TRANSFORMER, IF |
| ♠ IFT152 | ;1-404-293-00 | TRANSFORMER, IF |
| ♠ IFT153 | ;1-404-293-00 | TRANSFORMER, IF |
| ♠ IFT154 | ;1-404-194-00 | TRANSFORMER, IF |
| IFT201 | 1-404-195-00 | TRANSFORMER, IF |
| IFT202 | 1-404-113-00 | TRANSFORMER, DISCRI |
| IFT203 | 1-404-138-00 | TRANSFORMER, IFT |
| IFT204 | 1-404-138-00 | TRANSFORMER, IFT |
| L105 | ♠ ;1-420-947-11 | COIL, AIR-CORE |
| L106 | ♠ ;1-420-946-00 | COIL, AIR-CORE |
| L107 | 1-420-945-00 | COIL, AIR-CORE |
| L111 | 1-407-188-XX | MICRO INDUCTOR 6.8UH |
| L151 | 1-405-307-00 | COIL, OSCILLATOR FM |
| L152 | 1-407-188-XX | MICRO INDUCTOR 6.8UH |
| L201 | 1-407-163-XX | MICRO INDUCTOR 33UH |
| L202 | 1-407-163-XX | MICRO INDUCTOR 33UH |
| Q101 | 8-761-200-00 | TRANSISTOR 3SK48 |
| Q102 | 8-761-200-00 | TRANSISTOR 3SK48 |
| Q107 | 8-729-803-04 | TRANSISTOR 2SC930 |
| Q108 | 8-765-300-00 | TRANSISTOR 2SC2009 |
| Q109 | 8-765-300-00 | TRANSISTOR 2SC2009 |
| Q110 | 8-765-430-00 | TRANSISTOR 2SC2143 |
| Q151 | 8-723-304-00 | TRANSISTOR 2SK43-4 |
| Q152 | 8-761-200-00 | TRANSISTOR 3SK48 |
| Q153 | 8-724-375-01 | TRANSISTOR 2SC403C |
| Q154 | 8-724-375-01 | TRANSISTOR 2SC403C |
| Q155 | 8-729-803-04 | TRANSISTOR 2SC930 |
| Q201 | 8-723-304-00 | TRANSISTOR 2SK43-4 |
| Q202 | 8-719-200-20 | TRANSISTOR 2SK107-2 |
| Q203 | 8-723-304-00 | TRANSISTOR 2SK43-4 |
| Q204 | 8-724-375-01 | TRANSISTOR 2SC403C |

## ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---|---|---|
| Q205 | 8-724-375-01 | TRANSISTOR 2SC403C |
| Q206 | 8-719-200-20 | TRANSISTOR 2SK107-2 |
| Q207 | 8-724-375-01 | TRANSISTOR 2SC403C |
| Q208 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q209 | 8-729-612-77 | TRANSISTOR 2SA1027R |
| Q210 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q211 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q301 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q302 | 8-729-201-52 | TRANSISTOR 2SA1015 |
| Q303 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q304 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q305 | 8-729-201-52 | TRANSISTOR 2SA1015 |
| Q306 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q307 | 8-729-201-52 | TRANSISTOR 2SA1015 |
| Q308 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q309 | 8-729-201-52 | TRANSISTOR 2SA1015 |
| Q310 | 8-729-201-52 | TRANSISTOR 2SA1015 |
| Q311 | 8-729-113-32 | TRANSISTOR 2SB733 |
| Q312 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q313 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| R222 | 1-214-122-00 | METAL 390 1% 1/4W |
| R223 | 1-214-134-00 | METAL 1.2K 1% 1/4W |
| R224 | 1-214-134-00 | METAL 1.2K 1% 1/4W |
| R225 | 1-214-122-00 | METAL 390 1% 1/4W |
| RT201 | 1-226-703-00 | RES, ADJ, METAL GLAZE 10K |
| RT202 | 1-226-775-00 | RES, ADJ, METAL GLAZE 100K |
| RT203 | 1-226-703-00 | RES, ADJ, METAL GLAZE 10K |
| RT301 | 1-226-772-00 | RES, ADJ, METAL GLAZE 4.7K |
| RT302 | 1-226-770-00 | RES, ADJ, METAL GLAZE 470 |
| RV401 | 1-224-738-00 | RES, VAR, CARBON 10K |
| T201 | 1-427-250-00 | TRANSFORMER,OUTPUT |
| X101 | 1-527-359-00 | CRYSTAL, OSC (41 CH) |
| X101 | 1-527-360-00 | CRYSTAL, OSC (42 CH) |
| X101 | 1-527-361-00 | CRYSTAL, OSC (43 CH) |
| X101 | 1-527-362-00 | CRYSTAL, OSC (44 CH) |
| X101 | 1-527-363-00 | CRYSTAL, OSC (45 CH) |
| X101 | 1-527-364-00 | CRYSTAL, OSC (46 CH) |
| X101 | 1-527-365-00 | CRYSTAL, OSC (47 CH) |
| X101 | 1-527-366-00 | CRYSTAL, OSC (48 CH) |
| X101 | 1-527-367-00 | CRYSTAL, OSC (49 CH) |
| X101 | 1-527-368-00 | CRYSTAL, OSC (50 CH) |
| X101 | 1-527-369-00 | CRYSTAL, OSC (51 CH) |
| X101 | 1-527-370-00 | CRYSTAL, OSC (52 CH) |
| X151 | 1-527-608-00 | OSCILLATOR, CRYSTAL |

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♠ " are not stocked since thev are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in µF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:µF, PF:µµF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS

- MMH : mH, UH : µH

SEMICONDUCTORS

In each case, U : µ, for example:
UA···: µA···, UPA···: µPA···, UPC···: µPC,
UPD···: µPD···

## 1/8 WATT CARBON RESISTOR

| Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.0 | — | 13 | 1-246-821-00 | 91 | 1-246-831-00 | 620 | 1-246-841-00 | 4.3k | 1-246-851-00 | 30k | 1-246-861-00 | 200k | 1-246-871-00 |
| 2.2 | 1-246-751-00 | 15 | 1-246-761-00 | 100 | 1-246-771-00 | 680 | 1-246-781-00 | 4.7k | 1-246-791-00 | 33k | 1-246-801-00 | 220k | 1-246-811-00 |
| 2.4 | — | 16 | 1-246-822-00 | 110 | 1-246-832-00 | 750 | 1-246-842-00 | 5.1k | 1-246-852-00 | 36k | 1-246-862-00 | 240k | 1-247-054-00 |
| 2.7 | 1-246-752-00 | 18 | 1-246-762-00 | 120 | 1-246-772-00 | 820 | 1-246-782-00 | 5.6k | 1-246-792-00 | 39k | 1-246-802-00 | 270k | 1-247-046-00 |
| 3.0 | — | 20 | 1-246-823-00 | 130 | 1-246-833-33 | 910 | 1-246-843-00 | 6.2k | 1-246-853-00 | 43k | 1-246-863-00 | 300k | 1-247-055-00 |
| 3.3 | 1-246-753-00 | 22 | 1-246-763-00 | 150 | 1-246-773-00 | 1.0k | 1-246-783-00 | 6.8k | 1-246-793-00 | 47k | 1-246-803-00 | 330k | 1-247-047-00 |
| 3.6 | — | 24 | 1-246-824-00 | 160 | 1-246-834-00 | 1.1k | 1-246-844-00 | 7.5k | 1-246-854-00 | 51k | 1-246-864-00 | 360k | 1-247-056-00 |
| 3.9 | 1-246-754-00 | 27 | 1-246-764-00 | 180 | 1-246-774-00 | 1.2k | 1-246-784-00 | 8.2k | 1-246-794-00 | 56k | 1-246-804-00 | 390k | 1-247-048-00 |
| 4.3 | — | 30 | 1-246-825-00 | 200 | 1-246-835-00 | 1.3k | 1-246-845-00 | 9.1k | 1-246-855-00 | 62k | 1-246-865-00 | 430k | 1-247-057-00 |
| 4.7 | 1-246-755-00 | 33 | 1-246-765-00 | 220 | 1-246-775-00 | 1.5k | 1-246-785-00 | 10k | 1-246-795-00 | 68k | 1-246-805-00 | 470k | 1-247-049-00 |
| 5.1 | — | 36 | 1-246-826-00 | 240 | 1-246-836-00 | 1.6k | 1-246-846-00 | 11k | 1-246-856-00 | 75k | 1-246-866-00 | 510k | 1-247-058-00 |
| 5.6 | 1-246-756-00 | 39 | 1-246-766-00 | 270 | 1-246-776-00 | 1.8k | 1-246-786-00 | 12k | 1-246-796-00 | 82k | 1-246-806-00 | 560k | 1-247-050-00 |
| 6.2 | — | 43 | 1-246-827-00 | 300 | 1-246-837-00 | 2.0k | 1-246-847-00 | 13k | 1-246-857-00 | 91k | 1-246-867-00 | 620k | 1-247-059-00 |
| 6.8 | 1-246-757-00 | 47 | 1-246-767-00 | 330 | 1-246-777-00 | 2.2k | 1-246-787-00 | 15k | 1-246-797-00 | 100k | 1-246-807-00 | 680k | 1-247-051-00 |
| 7.5 | 1-246-818-00 | 51 | 1-246-828-00 | 360 | 1-246-838-00 | 2.4k | 1-246-848-00 | 16k | 1-246-858-00 | 110k | 1-246-868-00 | 750k | 1-247-060-00 |
| 8.2 | 1-246-758-00 | 56 | 1-246-768-00 | 390 | 1-246-778-00 | 2.7k | 1-246-788-00 | 18k | 1-246-798-00 | 120k | 1-246-808-00 | 820k | 1-247-052-00 |
| 9.1 | 1-246-819-00 | 62 | 1-246-829-00 | 430 | 1-246-839-00 | 3.0k | 1-246-849-00 | 20k | 1-246-859-00 | 130k | 1-246-869-00 | 910k | 1-247-061-00 |
| 10 | 1-246-759-00 | 68 | 1-246-769-00 | 470 | 1-246-779-00 | 3.3k | 1-246-789-00 | 22k | 1-246-799-00 | 150k | 1-246-809-00 | 1 M | 1-247-053-00 |
| 11 | 1-246-820-00 | 75 | 1-246-830-00 | 510 | 1-246-840-00 | 3.6k | 1-246-850-00 | 24k | 1-246-860-00 | 160k | 1-246-870-00 | | |
| 12 | 1-246-760-00 | 82 | 1-246-770-00 | 560 | 1-246-780-00 | 3.9k | 1-246-790-00 | 27k | 1-246-800-00 | 180k | 1-246-810-00 | | |

## 1/4 WATT CARBON RESISTORS

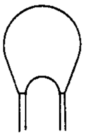
| Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. | Ω | Part No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 1-246-401-00 | 10 | 1-246-425-00 | 100 | 1-246-449-00 | 1.0k | 1-246-473-00 | 10k | 1-246-497-00 | 100k | 1-246-521-00 | 1.0M | 1-246-545-00 |
| 1.1 | 1-246-402-00 | 11 | 1-246-426-00 | 110 | 1-246-450-00 | 1.1k | 1-246-474-00 | 11k | 1-246-498-00 | 110k | 1-246-522-00 | 1.1M | 1-210-814-00 |
| 1.2 | 1-246-403-00 | 12 | 1-246-427-00 | 120 | 1-246-451-00 | 1.2k | 1-246-475-00 | 12k | 1-246-499-00 | 120k | 1-246-523-00 | 1.2M | 1-210-815-00 |
| 1.3 | 1-246-404-00 | 13 | 1-246-428-00 | 130 | 1-246-452-00 | 1.3k | 1-246-476-00 | 13k | 1-246-500-00 | 130k | 1-246-524-00 | 1.3M | 1-210-816-00 |
| 1.5 | 1-246-405-00 | 15 | 1-246-429-00 | 150 | 1-246-453-00 | 1.5k | 1-246-477-00 | 15k | 1-246-501-00 | 150k | 1-246-525-00 | 1.5M | 1-210-817-00 |
| 1.6 | 1-246-406-00 | 16 | 1-246-430-00 | 160 | 1-246-454-00 | 1.6k | 1-246-478-00 | 16k | 1-246-502-00 | 160k | 1-246-526-00 | 1.6M | 1-210-818-00 |
| 1.8 | 1-246-407-00 | 18 | 1-246-431-00 | 180 | 1-246-455-00 | 1.8k | 1-246-479-00 | 18k | 1-246-503-00 | 180k | 1-246-527-00 | 1.8M | 1-210-819-00 |
| 2.0 | 1-246-408-00 | 20 | 1-246-432-00 | 200 | 1-246-456-00 | 2.0k | 1-246-480-00 | 20k | 1-246-504-00 | 200k | 1-246-528-00 | 2.0M | 1-210-820-00 |
| 2.2 | 1-246-409-00 | 22 | 1-246-433-00 | 220 | 1-246-457-00 | 2.2k | 1-246-481-00 | 22k | 1-246-505-00 | 220k | 1-246-529-00 | 2.2M | 1-210-821-00 |
| 2.4 | 1-246-410-00 | 24 | 1-246-434-00 | 240 | 1-246-458-00 | 2.4k | 1-246-482-00 | 24k | 1-246-506-00 | 240k | 1-246-530-00 | 2.4M | 1-244-754-00 |
| 2.7 | 1-246-411-00 | 27 | 1-246-435-00 | 270 | 1-246-459-00 | 2.7k | 1-246-483-00 | 27k | 1-246-507-00 | 270k | 1-246-531-00 | 2.7M | 1-244-755-00 |
| 3.0 | 1-246-412-00 | 30 | 1-246-436-00 | 300 | 1-246-460-00 | 3.0k | 1-246-484-00 | 30k | 1-246-508-00 | 300k | 1-246-532-00 | 3.0M | 1-244-756-00 |
| 3.3 | 1-246-413-00 | 33 | 1-246-437-00 | 330 | 1-246-461-00 | 3.3k | 1-246-485-00 | 33k | 1-246-509-00 | 330k | 1-246-533-00 | 3.3M | 1-244-757-00 |
| 3.6 | 1-246-414-00 | 36 | 1-246-438-00 | 360 | 1-246-462-00 | 3.6k | 1-246-486-00 | 36k | 1-246-510-00 | 360k | 1-246-534-00 | 3.6M | 1-244-758-00 |
| 3.9 | 1-246-415-00 | 39 | 1-246-439-00 | 390 | 1-246-463-00 | 3.9k | 1-246-487-00 | 39k | 1-246-511-00 | 390k | 1-246-535-00 | 3.9M | 1-244-759-00 |
| 4.3 | 1-246-416-00 | 43 | 1-246-440-00 | 430 | 1-246-464-00 | 4.3k | 1-246-488-00 | 43k | 1-246-512-00 | 430k | 1-246-536-00 | 4.3M | 1-244-760-00 |
| 4.7 | 1-246-417-00 | 47 | 1-246-441-00 | 470 | 1-246-465-00 | 4.7k | 1-246-489-00 | 47k | 1-246-513-00 | 470k | 1-246-537-00 | 4.7M | 1-244-761-00 |
| 5.1 | 1-246-418-00 | 51 | 1-246-442-00 | 510 | 1-246-466-00 | 5.1k | 1-246-490-00 | 51k | 1-246-514-00 | 510k | 1-246-538-00 | 5.1M | 1-244-762-00 |
| 5.6 | 1-246-419-00 | 56 | 1-246-443-00 | 560 | 1-246-467-00 | 5.6k | 1-246-491-00 | 56k | 1-246-515-00 | 560k | 1-246-539-00 | | |
| 6.2 | 1-246-420-00 | 62 | 1-246-444-00 | 620 | 1-246-468-00 | 6.2k | 1-246-492-00 | 62k | 1-246-516-00 | 620k | 1-246-540-00 | | |
| 6.8 | 1-246-421-00 | 68 | 1-246-445-00 | 680 | 1-246-469-00 | 6.8k | 1-246-493-00 | 68k | 1-246-517-00 | 680k | 1-246-541-00 | | |
| 7.5 | 1-246-422-00 | 75 | 1-246-446-00 | 750 | 1-246-470-00 | 7.5k | 1-246-494-00 | 75k | 1-246-518-00 | 750k | 1-246-542-00 | | |
| 8.2 | 1-246-423-00 | 82 | 1-246-447-00 | 820 | 1-246-471-00 | 8.2k | 1-246-495-00 | 82k | 1-246-519-00 | 820k | 1-246-543-00 | | |
| 9.1 | 1-246-424-00 | 91 | 1-246-448-00 | 910 | 1-246-472-00 | 9.1k | 1-246-496-00 | 91k | 1-246-520-00 | 910k | 1-246-544-00 | | |

## MYLAR CAPACITORS

RATING

| CAP. (µF) | 50 VOLT. | 100 VOLT. | 200 VOLT. | CAP. (µF) | 50 VOLT. | 100 VOLT. | 200 VOLT. | CAP. (µF) | 50 VOLT. | 100 VOLT. | 200 VOLT. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | PART No. | PART No. | PART No. | | PART No. | PART No. | PART No. | | PART No. | PART No. | PART No. |
| 0.001 | 1-108-227-00 | 1-108-365-00 | 1-108-409-00 | 0.01 | 1-108-239-00 | 1-108-377-00 | 1-108-421-00 | 0.1 | 1-108-251-00 | 1-108-389-00 | 1-108-433-00 |
| 0.0012 | 1-108-351-00 | 1-108-366-00 | 1-108-410-00 | 0.012 | 1-108-357-00 | 1-108-378-00 | 1-108-422-00 | 0.12 | 1-108-363-00 | 1-108-390-00 | 1-108-434-00 |
| 0.0015 | 1-108-228-00 | 1-108-367-00 | 1-108-411-00 | 0.015 | 1-108-240-00 | 1-108-379-00 | 1-108-423-00 | 0.15 | 1-108-252-00 | 1-108-391-00 | 1-108-435-00 |
| 0.0018 | 1-108-352-00 | 1-108-368-00 | 1-108-412-00 | 0.018 | 1-108-358-00 | 1-108-380-00 | 1-108-424-00 | 0.18 | 1-108-364-00 | 1-108-392-00 | 1-108-436-00 |
| 0.0022 | 1-108-230-00 | 1-108-369-00 | 1-108-413-00 | 0.022 | 1-108-242-00 | 1-108-381-00 | 1-108-425-00 | 0.22 | 1-108-254-00 | 1-108-393-00 | 1-108-437-00 |
| 0.0027 | 1-108-353-00 | 1-108-370-00 | 1-108-414-00 | 0.027 | 1-108-359-00 | 1-108-382-00 | 1-108-426-00 | 0.27 | 1-108-854-00 | – | – |
| 0.0033 | 1-108-232-00 | 1-108-371-00 | 1-108-415-00 | 0.033 | 1-108-244-00 | 1-108-383-00 | 1-108-427-00 | 0.33 | 1-108-855-00 | – | – |
| 0.0039 | 1-108-354-00 | 1-108-372-00 | 1-108-416-00 | 0.039 | 1-108-360-00 | 1-108-384-00 | 1-108-428-00 | 0.39 | 1-108-856-00 | – | – |
| 0.0047 | 1-108-234-00 | 1-108-373-00 | 1-108-417-00 | 0.047 | 1-108-246-00 | 1-108-385-00 | 1-108-429-00 | 0.47 | 1-108-857-00 | – | – |
| 0.0056 | 1-108-355-00 | 1-108-374-00 | 1-108-418-00 | 0.056 | 1-108-361-00 | 1-108-386-00 | 1-108-430-00 | | | | |
| 0.0068 | 1-108-237-00 | 1-108-375-00 | 1-108-419-00 | 0.068 | 1-108-249-00 | 1-108-387-00 | 1-108-431-00 | | | | |
| 0.0082 | 1-108-356-00 | 1-108-376-00 | 1-108-420-00 | 0.082 | 1-108-362-00 | 1-108-388-00 | 1-108-432-00 | | | | |

## TANTALUM CAPACITORS



RATING →: Use the high voltage rated one.

| CAP. (µF) | 3.15 VOLT. | 6.3 VOLT. | 10 VOLT. | 16 VOLT. | 20 VOLT. | 25 VOLT. | 35 VOLT. |
|---|---|---|---|---|---|---|---|
| | PART No. | PART No. | PART No. | PART No. | PART No. | PART No. | PART No. |
| 0.01 | | | | | → | → | 1-131-396-00 |
| 0.015 | | | | | | → | 1-131-397-00 |
| 0.022 | | | | | | → | 1-131-398-00 |
| 0.033 | | | | | | → | 1-131-399-00 |
| 0.047 | | | | | | → | 1-131-400-00 |
| 0.068 | | | | | → | → | 1-131-401-00 |
| 0.1 | | | | | → | → | 1-131-402-00 |
| 0.15 | | | | | → | → | 1-131-403-00 |
| 0.22 | | | | | → | → | 1-131-404-00 |
| 0.33 | | | | | → | 1-131-409-00 | 1-131-405-00 |
| 0.47 | – | – | – | – | 1-131-412-00 | → | 1-131-406-00 |
| 0.68 | – | – | – | 1-131-415-00 | → | 1-131-410-00 | 1-131-407-00 |
| 1.0 | – | – | 1-131-418-00 | – | 1-131-413-00 | → | 1-131-408-00 |
| 1.5 | – | 1-131-421-00 | – | 1-131-416-00 | → | 1-131-411-00 | 1-131-348-00 |
| 2.2 | 1-131-424-00 | – | 1-131-419-00 | – | 1-131-414-00 | 1-131-355-00 | 1-131-349-00 |
| 3.3 | – | 1-131-422-00 | – | 1-131-417-00 | 1-131-362-00 | 1-131-356-00 | 1-131-350-00 |
| 4.7 | 1-131-425-00 | – | 1-131-420-00 | 1-131-369-00 | 1-131-363-00 | 1-131-357-00 | 1-131-351-00 |
| 6.8 | – | 1-131-423-00 | 1-131-376-00 | 1-131-370-00 | 1-131-364-00 | 1-131-358-00 | 1-131-352-00 |
| 10 | 1-131-426-00 | 1-131-383-00 | 1-131-377-00 | 1-131-371-00 | 1-131-365-00 | 1-131-359-00 | 1-131-353-00 |
| 15 | 1-131-390-00 | 1-131-384-00 | 1-131-378-00 | 1-131-372-00 | 1-131-366-00 | 1-131-360-00 | – |
| 22 | 1-131-391-00 | 1-131-385-00 | 1-131-379-00 | 1-131-373-00 | 1-131-367-00 | | |
| 33 | 1-131-392-00 | 1-131-386-00 | 1-131-380-00 | 1-131-374-00 | | | |
| 47 | 1-131-393-00 | 1-131-387-00 | 1-131-381-00 | – | | | |
| 68 | 1-131-394-00 | 1-131-388-00 | – | – | | | |
| 100 | 1-131-395-00 | – | – | – | | | |

## TANTALUM CAPACITORS

RATING

| CAP. (µF) | 3 VOLT. | 6.3 VOLT. | 10 VOLT. | 16 VOLT. | 20 VOLT. | 35 VOLT. |
|---|---|---|---|---|---|---|
| | PART No. | PART No. | PART No. | PART No. | PART No. | PART No. |
| 0.033 | | | | | | 1-131-273-00 |
| 0.047 | | | | | | 1-131-274-00 |
| 0.068 | | | | | | 1-131-275-00 |
| 0.1 | | | | | | 1-131-276-00 |
| 0.15 | | | | | | 1-131-277-00 |
| 0.22 | | | – | – | 1-131-262-00 | 1-131-278-00 |
| 0.33 | | | – | – | 1-131-263-00 | 1-131-279-00 |
| 0.47 | | | 1-131-169-00 | – | 1-131-264-00 | 1-131-280-00 |
| 0.68 | | | – | 1-131-258-00 | 1-131-265-00 | 1-131-281-00 |
| 1.0 | | | 1-131-254-00 | – | 1-131-266-00 | 1-131-282-00 |
| 1.5 | | 1-131-250-00 | – | – | 1-131-267-00 | 1-131-283-00 |
| 2.2 | | – | – | 1-131-259-00 | 1-131-268-00 | 1-131-284-00 |
| 3.3 | | – | 1-131-255-00 | – | 1-131-269-00 | – |
| 4.7 | | 1-131-251-00 | 1-131-171-00 | – | 1-131-270-00 | – |
| 6.8 | | – | – | 1-131-260-00 | 1-131-271-00 | – |
| 10 | – | – | 1-131-256-00 | – | 1-131-272-00 | – |
| 15 | – | 1-131-252-00 | – | 1-131-261-00 | | |
| 22 | – | – | 1-131-257-00 | – | | |
| 33 | 1-131-176-00 | 1-131-253-00 | 1-131-173-00 | – | | |
| 47 | 1-131-288-00 | 1-131-174-00 | – | – | | |
| 100 | 1-131-177-00 | | | | | |

9-950-651-21

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